



Measuring Individual Poverty: Correlates and Variation Over Time

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Executive Summary

In this report we use a data set that captures a 5 percent sample of individuals residing in Australia over three Census years: 2006, 2011 and 2016.¹ We capture family income and socio-demographic measures for these individuals, which allows us to shed light on the poverty faced by Australians at a household level and how this poverty varies over time. We use these data to estimate who is likely to experience income-based poverty in any single year, who is more likely to move into or out of poverty over the sample period, and who is at greatest risk of experiencing poverty over multiple years and cycles. The analysis advances our collective ability to identify and map the complexity of cycles of disadvantage and make them visible in ways that will help us to improve practice and policy to address poverty in Australia.

This report extends work undertaken by Payne and Samarage (2020), who use full Census data for the same years (2006, 2011 and 2016). In that work, the authors develop community-level poverty rates and uncover the depth and distribution of poverty across communities and over time. The analysis demonstrates that a high proportion of communities exhibit poverty rates that far exceed country-wide poverty rates. The authors also document variation in the degree of persistence or cyclicity of high poverty in communities and associated socio-demographic characteristics that may explain this persistence.

The current report explores more deeply experiences of income-based poverty. We explore correlates between socio-demographic characteristics and poverty. We start by analysing three snapshots of poverty (from years 2006, 2011 and 2016), then proceed to look at the dynamics of moving into or out of

poverty. We examine the factors that change over time (ageing, gaining or losing employment, educational attainment, and family dynamics) that may affect poverty. We then explore the correlation between community poverty rates and individual poverty.

Poverty as a concept should be distinguished from *entrenchment*. In this report, experiencing poverty is based on a mechanical definition that is commonly used to study poverty. We compare the reported household income relative to the median income in Australia for an equivalently sized income. If the household income is less than 60 percent of the equivalent median income, the household is identified as being in poverty.

The data permit us to explore poverty for a given individual over time. Thus, we also study the degree to which the poverty observed for the individual appears entrenched (for example, observed over multiple Census years). We then study groups of individuals based on a range of characteristics. This permits us to better explore poverty rates for a given group as well as the levels of *entrenched* poverty for individuals within the group as observed by experiencing several years of poverty. For example, we might observe a relatively low overall poverty rate for a given demographic group but a high proportion of those identified as being in poverty are in poverty for two or all of the Census years.

The strength of the data used in this report is that we provide a more focused analysis of the poverty issues faced by Australians. We can start to disentangle episodic bouts of poverty versus entrenched or persistent poverty. This is a critical stepping stone for developing better policy and practice to address poverty in Australia.

1. The main source of data for this report is the Australian Census Longitudinal Dataset (ACL) which is a randomised sample that links observations over the three Census years. These data make it possible to track economic conditions for the same individuals over a 10-year period. For each of the Census years, we classify individuals as being in poverty if their family measurement of income is below 60 percent of median income, adjusted for the family composition of the individual.

Key Findings

1. When looking at the cross-sectional snapshots, we find striking correlations across a few key socio-demographic measures and poverty. Moreover, these correlations are persistent.

Across all years, the highest poverty rate is recorded for single parents and for those who did not finish high school. Indigenous people are approximately twice as likely to be in poverty than non-Indigenous Australian-born persons. Foreign-born individuals are significantly more likely to be in poverty than non-Indigenous Australian-born individuals. Consistent with other reports on poverty in Australia, we find that income poverty among individuals over 65 years old is higher than the poverty among other age cohorts. This result, however, might be driven by how the Census computes income and whether we should use a different metric for identifying poverty. For example, income does not capture wealth such as the value of owner-occupied housing. While wealth is not the same as income, at older ages, if one's daily expenses are decreased because of such things as owning a home outright or being able to draw down on savings or superannuation, reporting low levels of income would not necessarily be an indicator of poverty.

2. The poverty rate of single parents, individuals that have not completed high school, and women not in the labour force increased the most among all groupings studied between 2006 and 2011 in absolute terms.

One of the explanations for the magnitude of these fluctuations is that the global financial crisis (GFC) of 2008–2009, while not triggering a recession in Australia, had a had a negative impact on the employment levels of the most vulnerable groups. Further analysis confirms that transitioning from employment to unemployment or out of the labour force

is associated with an increased likelihood of being in poverty and a significantly decreased likelihood of exiting poverty by the next Census period. This observation has important implications for COVID-19 economic policies. It is commonly assumed that people who have lost their jobs as a result of COVID-19-related recession will gain them again once the epidemiological situation gets back to normal and the economy starts growing again. Our analysis suggests that entering unemployment might bring long-lasting negative impacts on a person's capacity to move out of poverty. This conclusion is consistent with the findings in the academic literature on labour economics regarding permanent 'scars' of temporary joblessness.²

3. Poverty in Australia has both 'entrenched' and 'dynamic' components. More than half of those in poverty in 2016 were observed in poverty for at least one of the other two Census years.

Twenty-two percent were observed in poverty in both of the previous Census years and 34 percent were observed in poverty in either 2006 or 2011. The longer a person spends in poverty, the lower the probability that they will move out of poverty: 35 percent of those who were in poverty in 2006 and 2011 were still in poverty in 2016. The persistence of experiencing income-based poverty across generations is shown in Breaking Down Barriers (BDB) Report 1 (Vera-Toscano and Wilkins, 2020). Report 1 demonstrates that there is a strong positive correlation between a child's parents experiencing poverty and the child as a young adult also experiencing poverty. This current report drills into the length of poverty spells and the correlations within households of exiting poverty.

2. See, for example, Arulampalam (2001) and Gregg and Tominey (2005).

4. Changes in family, education or employment status is associated with moving into or out of poverty.

People change their family type over time, as well as their level of education and employment status. We find that those who exit poverty are more likely to experience a positive change in employment status and/or educational degree than those who remain in poverty. Specifically, among those who moved out of poverty between 2006 and 2011, 24 percent had a better employment outcome. Among those observed in poverty in both 2006 and 2011, only 8 percent had a better employment outcome.

5. Living in a community with high poverty rates is associated with greater persistence in staying in poverty.

We find that people who reside in communities with high poverty rates have, on average, similar relative incomes as people who reside in communities with lower poverty rates. Comparable studies using data from the United States suggest that economic opportunities or challenges in communities are positively correlated with remaining in poverty. For those individuals residing in communities with persistently high poverty rates, we find that 18 percent of individuals with income that represents less than 40 percent of median income fail to increase their income in later years.

1. Introduction





Understanding income-based disadvantage involves studying both indicators of poverty at different points as well as the dynamics of the flows into and out of poverty. Around the world, poverty rates are considered a key indicator for government policies, from international reporting to national policy formation. This report continues our work on income-based disadvantage. The Breaking Down Barriers report series (“BDB”) focuses on the reporting of analyses to uncover the rate, depth, distribution, flow and persistence of income-based poverty in Australia. Building on the work of other scholars and previous analyses, we pursue a deeper understanding of the main drivers and potential pathways out of poverty.

This report builds on Payne and Samarage (2020), the second BDB report which explored income poverty measured at a community level using Census data for the period 2006 to 2016. We documented heterogeneous poverty rates across communities that ranged from 0 to 63 percent. We explored poverty rates by family composition and also explored the correlation between a range of socio-demographic measures and changes in community poverty rates over time. Payne and Samarage (2020) demonstrated that poverty is a whole of Australia problem that is complicated because there are many deep pockets of poverty, and some of these pockets are entrenched. While many communities have been able to reduce their poverty rates or have consistently low poverty rates, there are many other communities that fluctuate into and out of poverty or have consistently high poverty rates.

Payne and Samarage (2020) focused on data that drilled into the spatial dynamics across communities. The current report takes that analysis a step further by exploring poverty faced by individuals within the context of their households and communities. Based on measures that capture reported family income for these individuals, we explore the extent to which these individuals could be classified as being in poverty as well as the patterns

of moving into or out of poverty. We use the Australian longitudinal Census data (ALCD), which allow us to follow the same people for up to three Census years (2006, 2011 and 2016). The ACLD (ABS, 2019) is a random sample of approximately 5 percent of the population in 2006 and captures information for the same individuals for all three Censuses. Described below are some notable issues with the data. This sample, however, permits us to provide a unique longitudinal perspective on poverty.

This report focuses on four types of analysis. First, for each of the three Census years, we examine poverty rates after grouping the individuals using a range of socio-demographic characteristics. We examine variations in poverty based on employment status, educational attainment, age and ethnicity. Second, we restrict the sample to those individuals whose income is observed in 2016 and at least one prior Census year (2006 or 2011). For this group of individuals, we analyse the patterns of moving into or out of poverty. Third, for those individuals whose Census records and income are observed for all three Census years, we further delve into the pathways of poverty to better explore patterns of moving into or out of poverty and the socio-demographic correlates that may explain the observed movement. Fourth, we connect these individuals to their communities and undertake an initial exploration of the relationship between community poverty rates and individual poverty.

We reach the following conclusions. First, in all three Census years, there are significant differences in poverty rates across socio-demographic groups. These gaps are persistent. For example, in any single year, the highest poverty rate recorded is among those who are older than 65 years, those who are single parents and those who have not completed high school. Indigenous people are approximately twice as likely to be in poverty than non-Indigenous people, and the gap between Indigenous and non-Indigenous persons seems to be increasing.

Second, many Australians seem to be entrenched in poverty. Looking backwards, of those who were in poverty in 2016, 22 percent were in poverty in both of the previous Census years. Many individuals, however, entered poverty recently: 45 percent of those who were in poverty in 2016 were not identified as being in poverty previously. Looking forwards, of those in poverty in both 2006 and 2011, 35 percent remained in poverty in 2016.

Third, some groups face both high poverty and relatively low chances of moving out of poverty. For example, 50 percent of individuals who identified as Indigenous or Torres Strait Islander are classified as in poverty for at least one of the three Census years, and 46 percent of those who are classified as in poverty for at least one Census year are also in poverty for at least one other Census year. Just because a group's overall poverty rate is low does not mean that those in poverty in such a group easily escape poverty. For example, only 15 percent of individuals who are employed full-time are classified as being in poverty for at least one year. Of those who are employed full-time and in poverty, 20 percent are observed in poverty for at least two of the three Census years. Characteristics associated with exiting poverty are moving to full-time employment and increasing one's educational achievement.

Fourth, we find that individuals who are in poverty and live in communities that are classified as entrenched (those among the top 20 percent of poverty rates in 2006 and 2016) face a lower probability of increasing their income and exiting poverty. Specifically, for entrenched communities, 18 percent of individuals whose income was below 40 percent of median income in 2006 reported income that remained less than 40 percent of median income in 2016. In comparison, in non-entrenched communities, this number was 6 percentage point less: 12 percent of individuals in the lowest income category continued to report income that was less than 40 percent of median income in 2016.

The remainder of this report is structured as follows. Section 2 provides a brief overview of the ACLD and the calculation of poverty status. Section 3 reports the analysis of socio-demographic correlates of poverty for all three Census years. Section 4 provides analysis of the dynamics of poverty for all individuals for whom at least one year of income data before 2016 was available. Section 5 describes pathways of poverty for individuals for whom poverty status for all three Census years could be calculated. Section 6 explores the link between community poverty rates and individual poverty. Section 7 provides a brief conclusion and is followed by the references and appendices.

2. Defining Poverty and Data Development





2.1

Australian Census Longitudinal Data



For a detailed description of the development of the data set used in this analysis, please see ABS (2019). The ACLD has been constructed to link individuals' information from the Census for 2006, 2011 and 2016. The sample reflects a random sample of approximately 5 percent of the population. Between 2006 and 2016, however, there were population changes (births, deaths and migration). The ABS uses a flexible technique to link the information for individuals over time that permits the sample to be increased with each additional Census year to capture population growth.³

A challenge when working with these data is that while most individuals can be tracked for all three periods, this is not always the case. As noted by the ABS (2019), not all individuals that were selected have Census records for all years. Of 979,662 observations in the 2006 data, 77.3 percent are linked to 2011 data. Of the sample observed in 2011, 80 percent are linked to 2016 data. Approximately 62 percent of observations in the 2006 sample are linked to 2016 data.

3. Longitudinal datasets can become less representative of the population over time because of demographic changes and also because not all individuals complete a Census form in every Census. To deal with this issue, the ACLD uses a multi-panel framework, designed by Chipperfield et al. (2017). This framework resamples the population to add individuals to minimise potential accumulated bias. The ACLD also provides sample weights for every follow-up year.

2.2

Defining Poverty



We follow the methodology used in Payne and Samarage (2020) to define poverty. This methodology follows that used in many reports and also reflects what is used by the Organisation for Economic Co-operation and Development (OECD). To classify an individual as being in poverty we compare the individual's income to a threshold of 60 percent of (equivalised) median income. Those falling below this threshold are classified as being in poverty. Household income is used for individuals living with family members residing in the house; personal income is used for individuals living without other family members. Our definition of income is constrained by the Census definition of income: wages and salaries; government pensions, benefits, and allowances; profits or losses from unincorporated businesses and rental properties; and other income such as superannuation, child support, interest and workers' compensation. As explained in Payne and Samarage (2020), we have not adjusted incomes for potential regional differences because the information that would be needed to make such an adjustment is not easily obtained from the Census data.

All incomes are adjusted based on the family size of the individual under study. Thus, we use what is referred to as the equivalised median

income. We follow Payne and Samarage (2020) in defining the poverty threshold for each family composition by taking the median income for that year, multiplying it by a family-specific adjustment factor (thus getting the equivalised median income) and then multiplying it by 0.6.

The adjustment factor for calculating equivalised income is defined as:

Adjustment factor

The adjustment factor for calculating equivalised income is defined as:

Adjustment factor = 1

+ 0.3 x (number of children younger than 15)
 + 0.5 x (number of children who are 15 or older)
 + 0.5 x (number of additional adults)

As is evident from this formula, we take into account both children and adults residing in the household. We assume that younger children require fewer expenses than older children. For each child younger than 15 years old, the median income is adjusted by adding 0.3 to the factor. For each child 15 years and older, the median income is adjusted by adding 0.5 to the factor. Each additional adult in the household

also incurs additional expenses. The number of additional adults can be either 0 (for single-person and single-parent households) and 1 (for couples). The total adjustment factor is 1.5 for a household with two adults, reflecting the fact that two adults living in the same household have fewer expenses (for example, housing, utilities, food) than if they lived in separate houses. Thus, a single parent with one 11-year-old child would have their income compared to 1.3 times the median income of individuals, while a single parent with two children—one of 11 years old and one of 19 years old—would have their income compared to 1.8 times the median income of individuals.

A crucial step in calculating poverty status is computing family income. A challenge in working with the ACLD is that, to protect privacy, family income is reported in ranges.

We follow Payne and Samarage (2020) in using the mid-point of the range as the value of income. For most of the households, it does not matter which point within the range is used for classifying the household as being in or out of poverty because the threshold lies entirely outside of the range. For those households where the poverty threshold falls within a bin, we must make a judgement call as to whether to classify the household as in or out of poverty. We classify the household as being in poverty if the poverty threshold for that household type is 'close' to the mid-point of the income range (that is, it lies within a quarter of the income range of the household). As reported below, for the most part, the poverty rates resulting from this process are close to the results from the community-level analysis reported in Payne and Samarage (2020).



2.3

Samples Used for Analysis



We developed three subset samples that are used in the analyses below. Sample #1 uses the most available information and is used for the cross-sectional analysis in Section III. As explained in more detail in Appendix 1, we restricted our sample to exclude those under 15, full-time students, visitors to Australia, and a few other restrictions based on missing data on income or family type. This resulted in 620,514 observations in 2006, 560,460 observations in 2011 and 481,390 observations in 2016.

For Sample #2, we further restricted the sample to capture those individuals for whom we observed information in 2016 and at least one other Census year. This restriction allows us to explore changes in poverty status at an individual level across Census periods. This sample is used in the analysis in Section 3.

Our starting point in creating Sample #2 was those individuals observed and studied in 2016 in Sample #1. Our list of inclusions and exclusions is reported in Table 1, Panel A. We added those observed as full-time students in 2016 to allow us to examine those who may have chosen to exit poverty by going to school. We then omitted

individuals whose personal income was missing, those who were younger than 15 in 2011, and those for whom we had no income information in 2006 and 2011. This left us with a sample of 485,664 individuals for whom we have income (and poverty status) for at least two years.

Finally, we created Sample #3, which restricts the sample further to explore in greater depth the extent to which poverty is persistent or cyclical. The focus of Sample #3 is those individuals with income information for all three Census years. The exclusions are reported in Table 1, Panel B. The starting point was the individuals who were captured in Sample #2, that is, 485,664 individuals. We then excluded from the sample those individuals who reported being full-time students in any given year, those with missing income information for at least one year, and those for whom we were unable to observe the family structure in the individual's home. This brought our sample down to 357,610 individuals.⁴ Based on being observed as in or not in poverty in 2016 in Sample #1, 79 percent of those identified as in poverty and 78 percent of those identified as not in poverty remained in this balanced sample.

4. Details on the number of individuals excluded are reported in Appendix Table A.1.

Table 1. Construction of Samples #2 and #3

	Number of individuals
Panel A: Construction of Sample #2	
Total number of individuals in 2016 from Sample #1	481,390
<i>Observations added</i>	
Individuals observed in full-time schooling in 2016	45,749
<i>Observations dropped</i>	
Individuals younger than 15 in 2011	38,099
Individuals whose income is missing for both 2006 and 2011	3,376
Sample #2: Total number of individuals analysed	485,664
Panel B: Construction of Sample #3	
Total number of students in any year	72,934
Total number of individuals with unobserved income in any year	45,935
Total number of individuals with unobserved family type in any year	9,185
Sample #3: Total number of individuals analysed	357,610

Notes for Table 1: The steps of constructing Sample #2 and Sample #3 are presented. “Income” refers to family income for individuals who are observed in families and individual income for people who classified as single.

In Table 2 we report the poverty rates for our three samples and compare them to the poverty rates in Payne and Samarage (2020). Payne and Samarage (2020) computed poverty rates for the full Census sample (with exclusions) using the same logic as described above, that is, comparing household income for a given family type relative to the median income for an equivalent family type in Australia. Because

we have excluded certain individuals, such as full-time students, poverty rates will differ across reports. Also, as explained above, there is no single measure that is accepted as a measure of poverty. We utilise one of the measures that is commonly used, that is, having a reported income that is less than 60 percent of the median income for the equivalent family type.

Table 2. Comparison of Poverty Rates Across ACLD and Full-Census Data

	2006 (1)	2011 (2)	2016 (3)
Panel A: Poverty Rates Based on ACLD			
<i>Sample #1 Poverty Rate</i>	17.2%	19.6%	13.1%
Number of observations for Sample #1	620,514	560,460	481,390
<i>Sample #2 Poverty Rate</i>	15%	17.9%	12.9%
Number of observations for Sample #2	440,038	464,049	485,664
<i>Sample #3 Poverty Rate</i>	14.5%	18%	12.4%
Number of observations for Sample #3	357,610	357,610	357,610
Panel B: Poverty Rates Based on Full Census			
(Based on sample constructed for Payne and Samarage, 2020)	17.1%	17.2%	14.7%

Notes for Table 2: The poverty rate for the ACLD sample utilises the weights for years 2011 and 2016 as provided by the ABS. The poverty rate from Payne and Samarage (2020) reflects those communities in Australia studied in that report. Payne and Samarage (2020) focus on poverty rates at a community level. The measures of poverty have been aggregated and reflect a family poverty rate based on comparisons of the family income to the median income adjusted for family composition.

In Table 2, Panel A, we report the poverty rates as computed for the three samples. Let us start with a comparison of the 2016 poverty rates. Recall that for Samples #2 and #3, our anchor for the construction of the sample is 2016. Even though the number of observations will differ according to whether we observe an individual in 2011 and/or 2006, we should expect the poverty rates to be similar in 2016. These rates are very similar, at approximately 13 percent. In Table 2, Panel B, we report the rates computed using the Payne and Samarage (2020) sample. The 2016 poverty rate is higher, at 14.7 percent. We suspect the driver for this higher rate is that we treat full-time students differently across the two reports. In Payne and Samarage (2020), all students are included in the sample. However, for this report, we separate full-time students from our calculation of poverty rates.

Moving next to 2011, the poverty rates across the three samples differ slightly, ranging from 18 to 19.6 percent. These rates are higher than those reported in Payne and Samarge (2020), to the order of 1.6 to 2.4 percent. The ACLD poverty rate aligns more closely to the rate computed using HILDA Survey data of 20 percent when using a similar definition for poverty (Azpitarre, 2012).

Finally, the greatest divergence in poverty rates across the three samples is for those reported in 2006. The poverty rate for Sample #1 is 17.2 percent and closely aligns with the Payne and Samarage (2020) data set.⁵ To construct samples that capture two (Sample #2) or three (Samples #2 and #3) years of data for a given individual results in losing individuals. The highest decline in observations is for 2006. As noted above, there is a greater likelihood of losing individuals at the lower end of the income distribution (poorer individuals) due to the information for the individual not being observed across the years covered in the ACLD. The lower 2006 poverty rate in Samples #2 and #3 illustrates this point further.

5. For Sample #1 we computed the poverty rate using population weights. For the remaining samples, we did not use weights because we excluded individuals for whom we had two or more observations. As the composition of the individuals in each sample differs, we should expect the poverty rates to differ from those reported in Sample #1.

3. Poverty and Socio-Demographic Correlates by Census Year





In this section, we focus on individuals observed for the given Census year, those in Sample #1. The purpose of this section is to explore poverty across a range of key socio-demographic characteristics.

3.1

Poverty Rates Based on Age



The first characteristic to explore is age. In Table 3, for the three Census years we report the share of our sample by age in columns (1), (3) and (5), respectively. Given our exclusion of full-time students in particular, the sample is not representative of age distribution in Australia. Across the age groups, most of the population under study falls into what is traditionally known as the working age part of the population. Over the three years, the share of the population in this age group declines by approximately 4 percent, which is indicative of the generally observed trend that Australia's population is ageing.

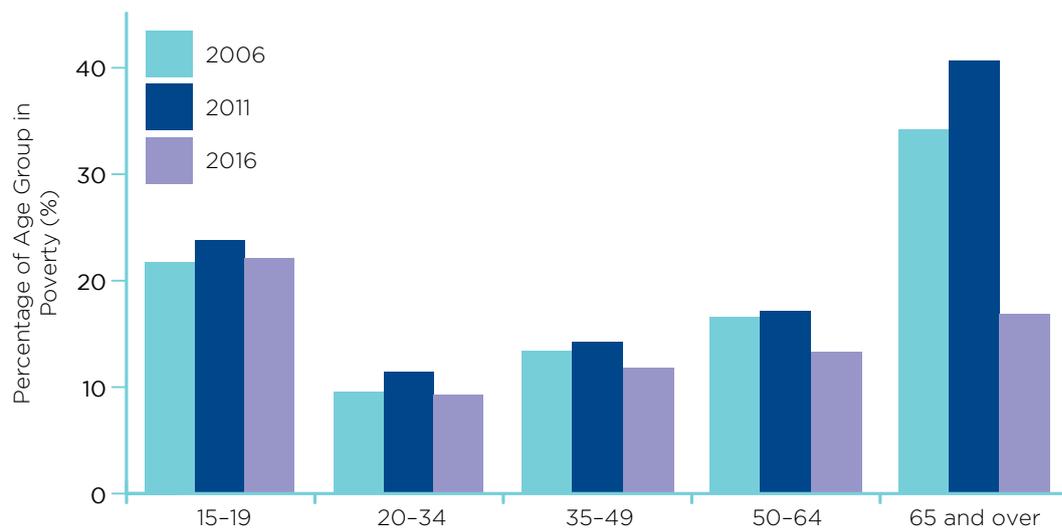
In columns (2), (4) and (6), we report the distribution of those in poverty across age groups. In Figure 1 we change the denominator to reflect the total population within the age group to depict the average poverty rates within each age group. Thus, Table 1 reflects poverty rates relative to the sample population and Figure 1 reflects poverty rates within each sub-population.

Starting first with those aged 15 to 19, a slightly higher proportion of those in poverty come from this age group, relative to the share represented in the sample. Between 2006 and 2016, while

Table 3. Poverty Rates by Age Group

Age Group	2006		2011		2016	
	Share of Sample	Share of Sample in Poverty	Share of Sample	Share of Sample in Poverty	Share of Sample	Share of Sample in Poverty
	(1)	(2)	(3)	(4)	(5)	(6)
15–19 years	2.9%	3.7%	2.4%	2.8%	1.9%	3.1%
20–34 years	25.1%	14.3%	23.7%	13.8%	21.8%	15.7%
35–49 years	30.2%	23.7%	29.1%	20.9%	27.7%	25.1%
50–64 years	24.6%	23.9%	26.0%	22.8%	26.7%	27.7%
65 years and older	17.3%	34.4%	19.0%	39.5%	21.9%	28.5%

Notes for Table 3: For years 2011 and 2016, ACLD weights are used for calculation of poverty rates.

Figure 1. Poverty Rates by Age Group

Notes for Figure 1: Poverty rates within age group are depicted.

the share in this age group falls in the sample, the proportion of those in poverty is more highly represented across those in poverty. Within the age group (Figure 1), however, the share in poverty over the three years is relatively stable, in the range of 22 to 24 percent.

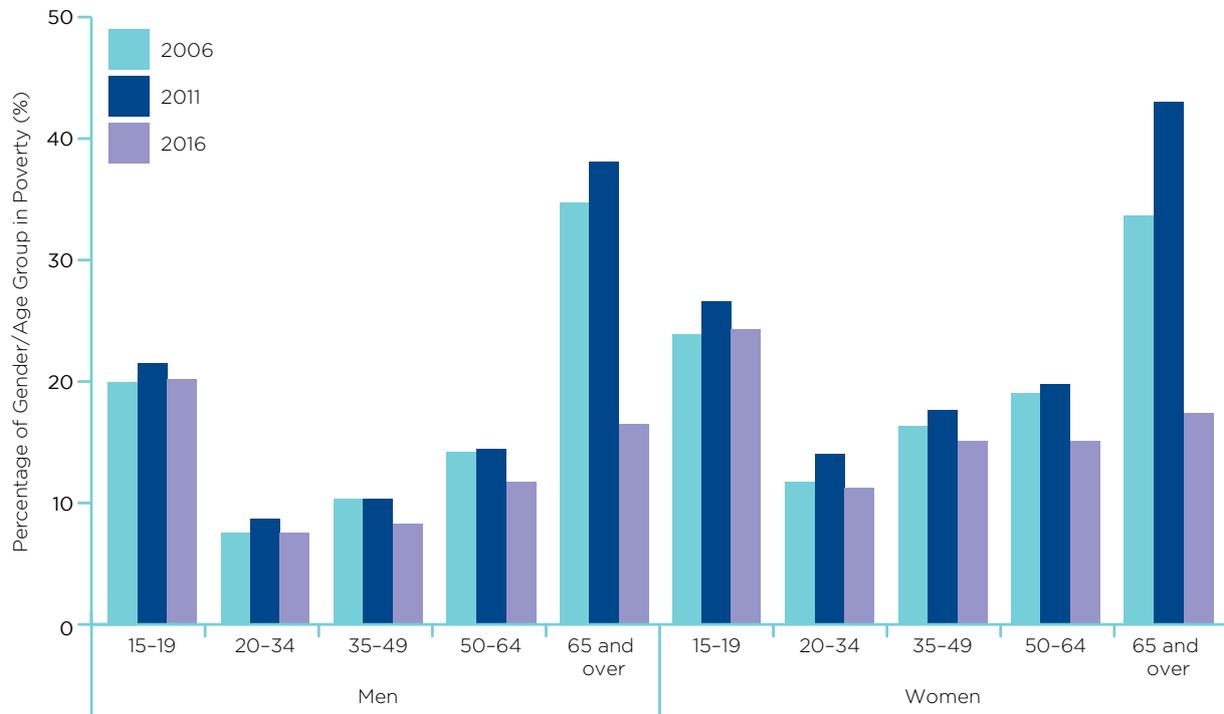
Let us move next to the three age groups that typically comprise the 'working age population', those aged between 20 and 64. As a share of the overall sample, the share has dropped for those aged between 20 and 49 but has increased for those aged between 50 and 64, reflecting the ageing of our population. Overall, the share of the sample has fallen by close to 4 percent. The share of the sample in poverty for this group, however, has increased by approximately 7 percent. The highest growth has been for those aged 50 to 64. Turning to Figure 1, as a proportion of each age group, the share in poverty has stayed relatively flat for those aged 20 to 34, fallen by 1.6 percent for those aged 35 to 49 and fallen by 3.1 percent for those aged 50 to 64.

What explains the proportion of young and working age Australians being represented as a higher proportion of those in poverty is reflected in the sharp decrease in poverty rates, both as a share of overall poverty and as a share within the age group, for those aged over 65. In 2006, approximately 34 percent of those in poverty came from this latter group. By 2016, this fell to

approximately 29 percent. Turning to Figure 1, there is a decline of more than 25 percent for those over the age of 65.

Table 3 suggests that a high proportion of those in poverty are older adults but that, over time, there has been an increase in poverty for those at younger ages. Figure 1 suggests that for all age groups except those over 65 there has been relatively little movement in poverty rates between 2006 and 2016. Around the time of the great recession (2010/2011), there was a slight increase in poverty. By 2016, however, the poverty rates reflect more closely the rates we observed in 2006. Declines in poverty have been driven mostly by those aged 50 and older. If we compare the poverty rates by age group with the national poverty rate for all Australians, those at younger and older ages exhibit poverty at a greater proportion than the national rate.

In Figure 2, we depict poverty rates by gender and age. The patterns across the age groups are similar for both genders. The rates of poverty within each age group are relatively flat, except for older Australians. The striking difference, however, is that the rates of poverty are higher for women across all age groups except for those over 65. Below, we explore the role of employment as a possible reason for these gender differences.

Figure 2. Poverty Rates by Gender/Age Group

Notes for Figure 2: Poverty rates within age group are depicted.

We are not the first to point out high poverty rates among the oldest cohort. The Australian Council of Social Service also reported the highest poverty rate for those aged 65 and older (ACOSS and UNSW, 2018). And in a 2015 report, the OECD shows that for people over 66 years old, the poverty rate in Australia is among the highest in OECD countries (OECD, 2015).⁶ But why is this the case? Why is old-age poverty in Australia so high? The answer to this question might be quite simple: age pension rates in Australia are lower than the poverty threshold. Specifically, at the beginning of 2016 the maximum basic rate of pension was \$20,498.⁷ This amounts to approximately \$394 per week, which is lower than the poverty threshold for a single person in 2016 (which is \$400). In 2011, the gap was even larger: the pension rate was approximately \$329 per week, while the poverty threshold for a single person was \$349 per week. In 2006, the gap was the largest of all the Census years: the pension rate was approximately \$236 per week, whereas the poverty threshold for a single person was \$281.

Although it is reassuring that the gap between the pension rate and the poverty threshold is gradually closing, further action is needed to bring old-age poverty in Australia down to the level of other OECD countries. As noted in Wilkins et al. (2019), because we use a measure of income that does not reflect the value of property wealth and do not adjust our poverty calculations to reflect housing costs, the poverty rates for those over 65 may be overstated.

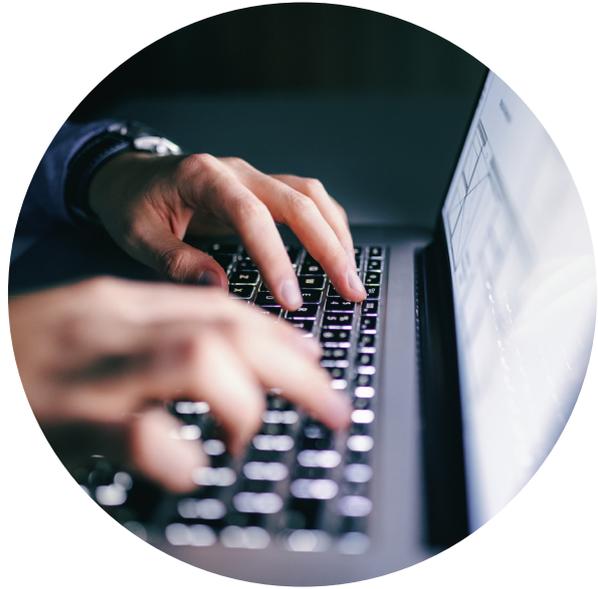
The high poverty rates among the oldest cohort might seem paradoxical because Payne and Samarage (2020) show that communities with a higher proportion of those over 65 are less likely to be in poverty. It is worth pointing out that one should be cautious in attempting to infer individual-level characteristics from aggregate data (the tendency that social scientists call 'ecological fallacy'). This effect may be a result of residential choices by seniors who might prefer to live in higher-income locations even if their own income after age 65 is below the poverty threshold.

6. It is worth pointing out that not everyone agrees with this assessment. For example, researchers at Grattan Institute argue that because older Australians are more likely to own their principal home, one should include imputed rent in their disposable income. Once this is done, the poverty rate among the oldest cohort is much lower (Coates and Chen, 2019). There are two problems with this approach. First, the value of individuals' owner-occupied homes is not observable in the Census data. Second, a decision whether to rent, buy or live in an owner-occupied primary place of residence depends on many factors and can itself lead to inconsistencies, as explained in Payne and Samarage (2020). In general, while it is reasonable to assert that individuals who own their place of residence are in fact 'richer' because of the potential high value of their assets, the focus of this report is on income poverty, and not on wealth poverty.

7. Social Security Guide: Version 1.270: Maximum Basic Rates of Pension—July 1909 to present date. Available at: <https://guides.dss.gov.au/guide-social-security-law/5/2/2/10>

3.2

Poverty Rates Based on Educational Attainment



Next, we turn to poverty based on the reported highest level of educational attainment. In Table 4 we report the distribution of the sample, overall and for those in poverty, by educational attainment. We have split the sample into five groups: those that have not completed high school (“less than high school”), those that have completed high school (“high school”), those with a certificate or diploma

beyond high school, those with a bachelor’s degree or higher, and those for whom educational attainment information is missing. In columns (1), (3), and (5) we report the share of the sample represented by the level of educational attainment. In columns (2), (4), and (6) we report the share of those in poverty represented by the level of educational attainment.

Table 4. Poverty Rates by Highest Level of Education

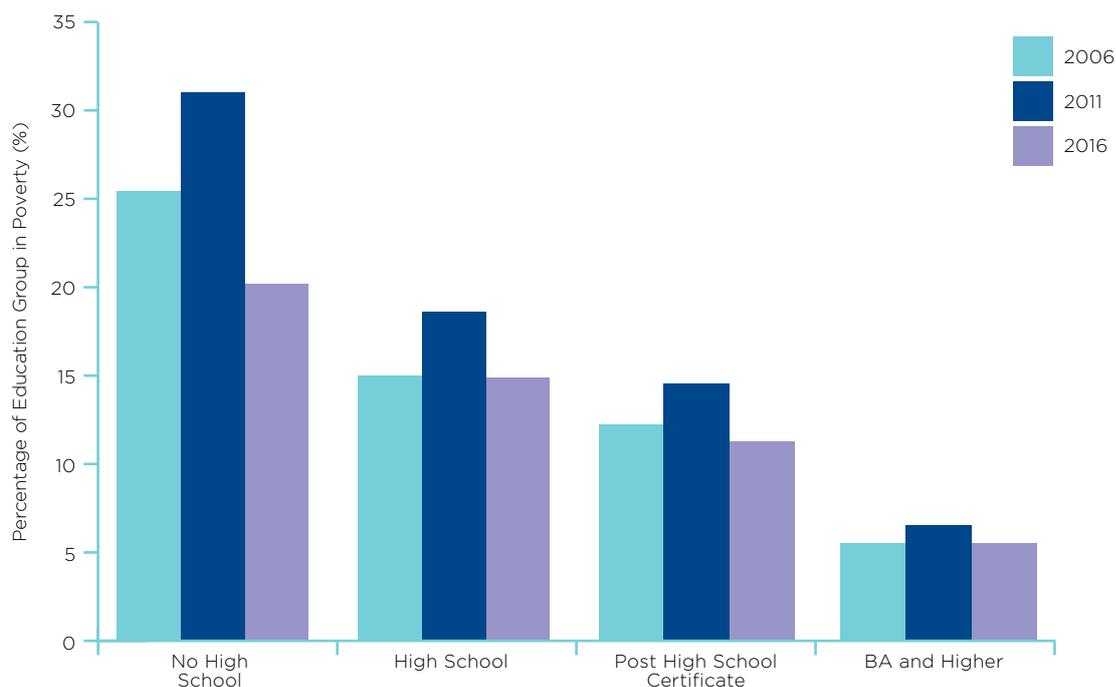
Sample Grouped by Educational Attainment	2006		2011		2016	
	Share of Sample (1)	Share of Sample in Poverty (2)	Share of Sample (3)	Share of Sample in Poverty (4)	Share of Sample (5)	Share of Sample in Poverty (6)
Less than high school	33.9%	50.0%	29.7%	47.0%	25.9%	40.0%
High school	15.7%	13.7%	15.6%	14.7%	15.6%	17.7%
Post high school certificate	24.5%	17.3%	27.1%	20.1%	29.0%	24.9%
Bachelor’s degree or higher	17.8%	5.7%	21.4%	7.2%	25.0%	10.5%
Unobserved education	8.3%	13.3%	6.2%	10.9%	4.6%	7.1%

Notes for Table 4: Each column represents the proportion of those under study that fall into each group (column). The proportions are population-weighted for years 2011 and 2016.

Starting first with those who have not completed high school, we might expect this to be a low proportion of the sample but a high proportion of those in poverty. In 2006, approximately 34 percent of the sample reported not having completed high school. By 2016, however, the share not having completed high school dropped to less than 26 percent. This decline reflects figures reported by the OECD and the increase in younger adults having completed high school. Most notably, in Table 4, the share of the sample with educational attainment beyond high school increased between 2006 and 2016. Over time, both the share of the sample and the share of those in poverty have declined for those not having completed high school.

Relatively flat is the share of the sample of those that have at most completed high school. The share of this group among individuals in poverty increased by 1 percentage point in 2011 and then increased by 3 percentage points by 2016. For those in the sample with a post-high school certificate or advanced diploma, the proportion of the sample has increased over time and the share of those in poverty for this group has also increased, from 17 to 25 percent. There has also been an increase in the share of the population with a university degree or higher, from close to 18 to 25 percent. The share of the population observed in poverty has increased from approximately 6 to close to 11 percent for this group.

Figure 3. Poverty Rates by Highest Level of Education



Notes for Figure 3: Poverty rate by education is shown. 'BA and Higher' category includes bachelor level, graduate level and postgraduate level. 'Certificate' category includes 'Certificate' and 'Advanced Diploma'. 'No High School' category includes people who did not finish high school.

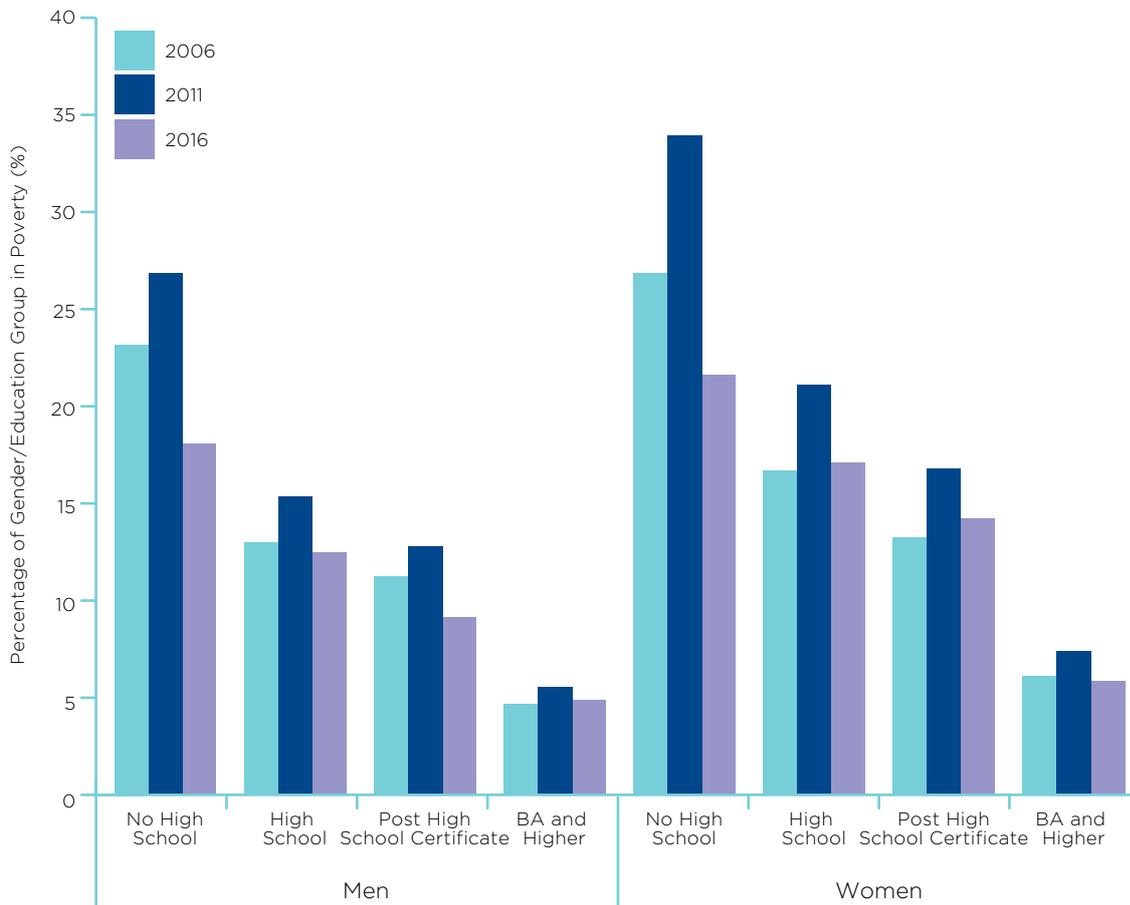
In Figure 3, we depict poverty rates within each educational grouping. For every year, the highest level of poverty was experienced by individuals who did not finish high school. Poverty rates are lower for the other groups. For the group who at most completed high school, the poverty rates are higher than the overall

national rate. Poverty rates are lower than the national poverty rates for those with a certificate or higher-level degree beyond high school. The rate for individuals with vocational training ('Certificate' and 'Advanced Diploma'), however, is only 3 to 4 percent different from those who at most completed high school.

When we look at the year-to-year changes in poverty rates, the rates for individuals that have not completed high school are the highest across all groups. Moreover, the poverty rate for this group increased the most between years 2006 and 2011 and decreased the most by 2016. This pattern is consistent with employment and income being the most sensitive to the aggregate economic fluctuations for those with lower skills and qualifications. The poverty rate among individuals with at least some university education seems least sensitive to year-to-year fluctuations. It increased slightly by 2011 and then dropped to the initial level by 2016.

Figure 4 reports poverty rates by educational attainment and gender. The poverty rate of women is up to 5 percentage points higher in all categories except for those with university degrees.

Figure 4. Poverty Rates by Gender/Education



Notes for Figure 4: Poverty rate within education grouping and gender. 'BA and Higher' category includes bachelor level, graduate level and postgraduate level. 'Certificate' category includes 'Certificate' and 'Advanced Diploma'. 'No High School' category includes individuals who did not finish high school.

3.3

Poverty Rates Based on Employment Status



While we should expect a strongly positive correlation between poverty and employment status, given there is variation in wages, it is important to consider poverty rates across different employment types. Table 5 reports the statistics that reflect the distribution of the sample and the distribution of those identified as being in poverty by employment status. Figure 5 depicts the poverty rates within each employment grouping. Consistent across all years, less than

half (approximately 43 to 44 percent) of the sample were employed full-time. If we combine the full- and part-time employment rates, approximately 60 percent of the sample were employed. Given the share of the sample of working age adults (20–64) represents between 76 and 80 percent of the sample, this share is on the low side of expectations. Statistics provided by the OECD suggest that the employment rate for those between 25 and 54 is 80 percent (OECD, 2020).

Table 5. Poverty Rates by Employment Status

Employment Group	2006		2011		2016	
	Share of Sample	Share of Sample in Poverty	Share of Sample	Share of Sample in Poverty	Share of Sample	Share of Sample in Poverty
	(1)	(2)	(3)	(4)	(5)	(6)
Employed full-time	43.9%	10.3%	44.3%	9.9%	42.6%	11.3%
Employed part-time	17.1%	13.5%	17.7%	14.8%	18.3%	19.0%
Unemployed	2.9%	7.1%	3.0%	6.2%	3.5%	9.5%
Not in labour force	31.6%	65.0%	30.9%	65.4%	32.4%	57.5%
Unobserved or away from work	4.5%	4.0%	4.1%	3.8%	3.3%	2.7%

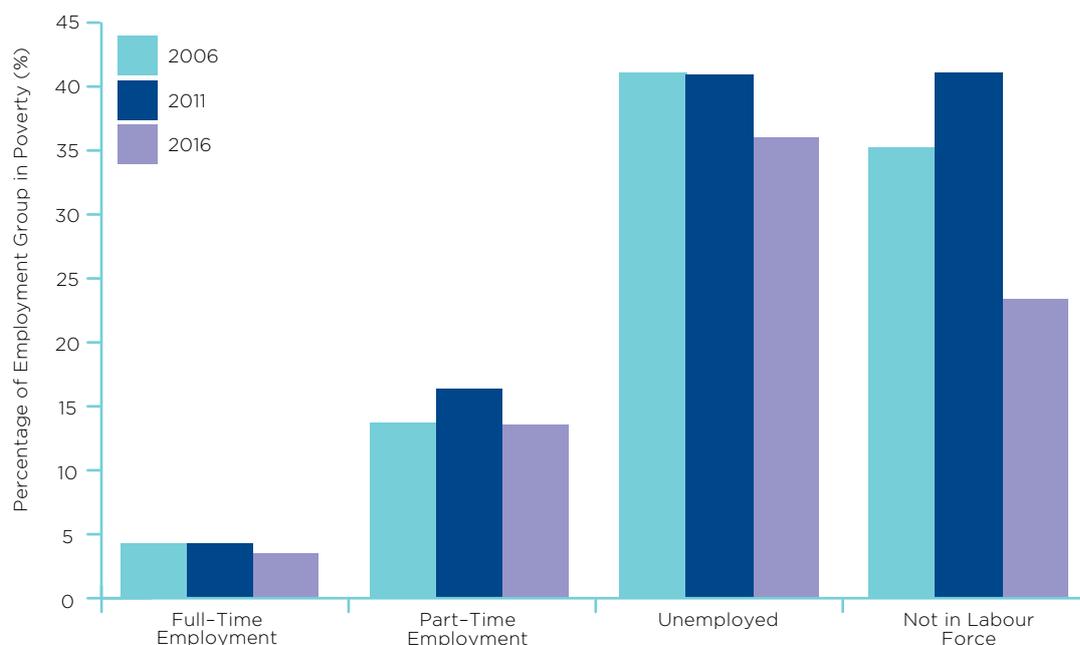
Notes for Table 5: For years 2011 and 2016, ACLD weights are used for calculation of poverty rates.

Approximately 10 percent of the sample in poverty are represented by those employed full-time. This share increased slightly over the period, ending at 11.3 percent in 2016. Within the group of those employed full-time, the share in poverty (Figure 5) fell from 4.1 to 3.5 percent over the sample period. Although these are relatively low numbers, it is surprising to observe individuals in poverty even though they were employed full-time. Part of the reason for this finding, however, may be attributable to family composition. If a given family only has one full-time employed adult, for example, the income may not be sufficient to meet the poverty thresholds based on the family composition.

In Table 5, for those identified as employed part-time, the share of the sample in this group increased slightly from 17.1 to 18.3 percent. The share of those in poverty also increased over time from 13.5 to 19.0 percent. This, in part, may be attributable to a decline in the share in poverty

that is represented by those not in the labour force which fell from 65.0 to 57.5 percent. Turning to Figure 5, the share of part-time workers that fell into poverty in 2006 and 2016 is identical, 13.6 percent. There was an increase in 2011 to 16.4 percent which is likely attributable to the period around the global financial crisis. Recall that our measure of income will incorporate income received from other members of the family as well as income from a range of sources. Wages are just one part of the income measured. Thus, it is important to be careful when drawing conclusions for this group. What we cannot observe is the extent to which working part-time is a choice versus the only option for employment. Families with children may choose to have one member work part-time to permit that individual to focus more on household and/or children-based activities. Part-time workers may also reflect preferences of older adults who have chosen to be in semi-retirement.⁸

Figure 5. Poverty Rates by Employment



Notes for Figure 5: Poverty rates within employment status. 'Unemployed' category includes those identified as looking for work (full-time or part-time).

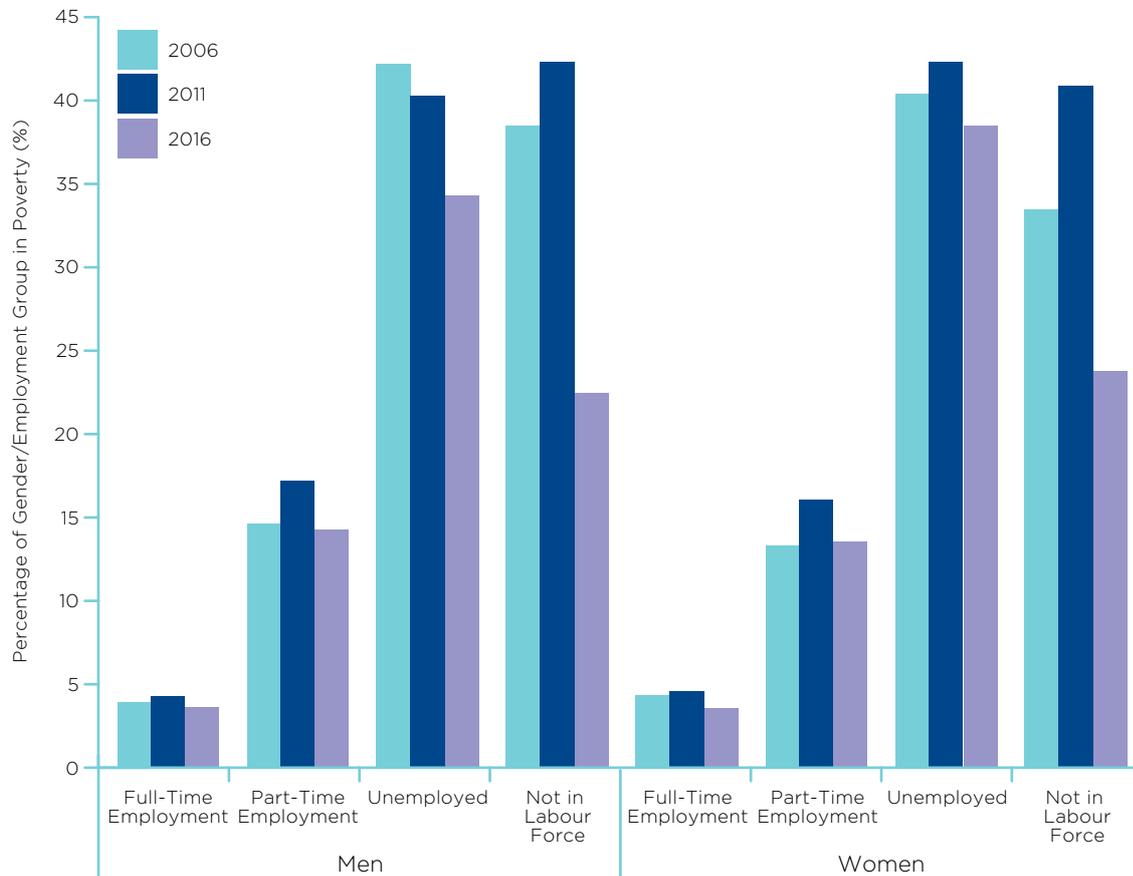
8. This is consistent with the full-count Census data, in which we observe that the number of families in which one adult in the couple works full-time, while the other works part-time, is approximately the same as the number of families in which both partners work full-time. When it comes to the age distribution of part-time workers, we find that older people are overrepresented: for each of the five-year age groups between 60 and 89, the share of that age group among all part-time workers exceeds its share in the population.

Traditionally, the groups we might be most concerned about when studying poverty are those who are unemployed and/or reported as being not in the labour force. For this latter group, we should be careful about the conclusions we might draw for the same reasons given when discussing those identified as being in part-time employment. Starting first with those who are identified as unemployed, which means they indicated that they were actively looking for work, this group represents between 2.9 and 3.5 percent of the sample under study. In our sample, the share represented by this group, who are identified as being in poverty, however, is much higher and has increased over time, from 7.1 to 9.5 percent. Turning to Figure 5, in 2006 and 2011, close to 41 percent of this group were in poverty. In 2016, this figure dropped to 36 percent. This drop could be attributed to changes in government policy, differences in overall family income and/or being able to draw on other financial resources.

The above discussion treats all individuals equally. The statistics, however, may differ across genders given differences in expectations in the handling of family and household responsibilities. Of those who were employed full-time, 64 percent are men. Of those who were employed part-time, 72 percent are women. And of those out of the workforce more men were unemployed (54 percent) and more women were out of the labour force (63 percent in 2006 and 59 percent in 2016).

Figure 6 depicts within-group poverty rates by employment status and gender. For all groups except the group identified as unemployed, the poverty rate patterns are the same for both genders. For those identified as unemployed, the poverty rates start out slightly higher for men in 2006. In 2011 and 2016, the poverty rates are lower for men than for women. By 2016, the poverty rate for unemployed men is 34 percent versus 38 percent for unemployed women. The decline in the poverty rate for the unemployed between 2011 and 2016 is close to 8 percent for men and only 4 percent for women.

Figure 6. Poverty Rates by Gender/Employment



Notes for Figure 6: Poverty rates within employment group and gender.

3.4

Poverty Rates by Place of Birth and Indigenous Status

Next, we look at poverty rates by Indigenous or Torres Strait Islander status (Indigenous) and place of birth, that is, born in Australia (non-Indigenous) or foreign-born. The ABS relies on self-reporting of Indigenous status. Others (AIHW, 2010) have written about this self-report likely under-representing the count of those identified as Indigenous. In addition, individuals may identify as Indigenous in one year but not in another. For the purpose of this report, an individual is identified as Indigenous if they ever reported being Indigenous. Foreign-born residents can be those who are temporary residents, permanent residents or Australian citizens.

In Table 6 we report the share of the sample (columns (1), (3), and (5)) and the share of those in poverty (columns (2), (4), and (6)) based on Indigenous status or birthplace. In Figure 7, we depict the within-poverty rates for each group. Not too surprisingly, the majority of those in the sample and those in poverty are Australian-born. The share of the sample who identified as Indigenous ranges from 1.7 to 2.9 percent, lower than what is reported for the overall population (approximately 3.3 percent). Of those who identified as Indigenous, a higher share of this group is represented in the sample of those in poverty (3.3 percent in 2006 and 6.0 percent in 2016). The share of the sample that

Table 6. Poverty Rates by Indigenous Status/Place of Birth

Sample Grouped by Indigenous Status/ Place of Birth	2006		2011		2016	
	Share of Sample (1)	Share of Sample in Poverty (2)	Share of Sample (3)	Share of Sample in Poverty (4)	Share of Sample (5)	Share of Sample in Poverty (6)
Indigenous	1.7%	3.3%	2.6%	4.4%	2.9%	6.0%
Australian-born (non-Indigenous)	70.2%	62.6%	68.9%	61.9%	66.9%	58.3%
Foreign-born	28.1%	34.1%	28.5%	33.6%	30.2%	35.8%

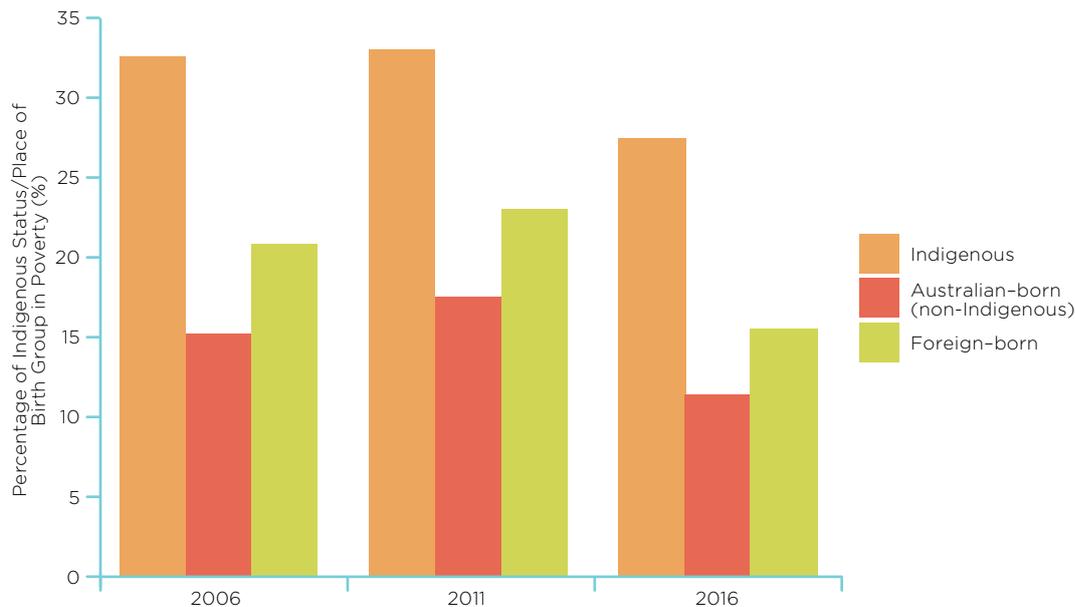
Notes for Table 6: Indigenous persons are those who are classified as Indigenous in at least one of the three Census years. Australian-born are those who are classified as born in Australia in at least one of the years. If place of birth and/or Indigenous status are missing for all years, the individual is classified as Australian-born.

is foreign-born starts at around 28 percent but ends at approximately 30 percent by 2016, likely a reflection of a policy to promote moving to Australia. More than a third of those in poverty, however, are represented by this group (34.1 to 35.8 percent).

Turning to Figure 7, for each group there are different patterns in poverty rates over the three Census years. Starting with those who identified as Indigenous, in 2006, close to 33 percent are in poverty. By 2016, this share dropped by more than 5 percent. For those who identified as Australian-

born, the share in poverty is less than half that observed for the Indigenous group. This share also dropped between 2006 and 2016, from 15.3 to 11.4 percent. Of those who are foreign-born, the poverty rates are higher than for those born in Australia (and not Indigenous) and they also fell between 2006 and 2016. In 2011, the year nearest the GFC, poverty rates increased the most for the foreign-born, followed by the Australian-born. By 2016, poverty rates for foreign-born and Indigenous individuals were higher than the national poverty rate.

Figure 7. Poverty Rates by Indigenous Status/Place of Birth



Notes for Figure 7: Poverty rates within group. Indigenous persons are those who are classified as Indigenous for any of the three Census years. If place of birth or Indigenous status are missing for all years, the person is classified as Australian-born.

3.5

Poverty Rates Based on Family Composition



The last demographic measure we examine is poverty rates based on family composition. As explained above, we have grouped our individuals into four broad categories: single households, single-parent households with dependent children, couple households, and couple households with dependent children. We have extracted from the data the familial relationships and focus on this dimension as opposed to household composition. The reason for this is that we cannot discern if the structure of a household is by choice or necessity. For example, a single person may want to live with

others and will choose to share a dwelling with others. The single person, however, may prefer to live on their own but due to expenses or a lack of income, be forced to live in a group house. We provide more detail on the rules we followed to classify individuals in our sample into family type in Appendix 3.

In Table 7, we report the share of the sample (columns (1), (3) and (5)) and the share of those in poverty (columns (2), (4), and (6)) for each family grouping. In Figure 8, we depict the poverty rates over time for each group. In

Table 7. Poverty Rates by Family Composition

Family Type	2006		2011		2016	
	Share of Sample	Share of Sample in Poverty	Share of Sample	Share of Sample in Poverty	Share of Sample	Share of Sample in Poverty
	(1)	(2)	(3)	(4)	(5)	(6)
Single-person household	30.9%	31.6%	30.7%	38.0%	31.3%	35.5%
Single-parent household	4.2%	9.4%	4.0%	9.8%	4.0%	11.9%
Couple household	36.3%	37.8%	35.7%	33.4%	35.5%	27.7%
Couple household with children	28.6%	21.1%	29.5%	18.7%	29.2%	25.0%

Notes for Table 7: Family composition is based on information on residential location of family members. Percentages for 2011 and 2016 are population-weighted.

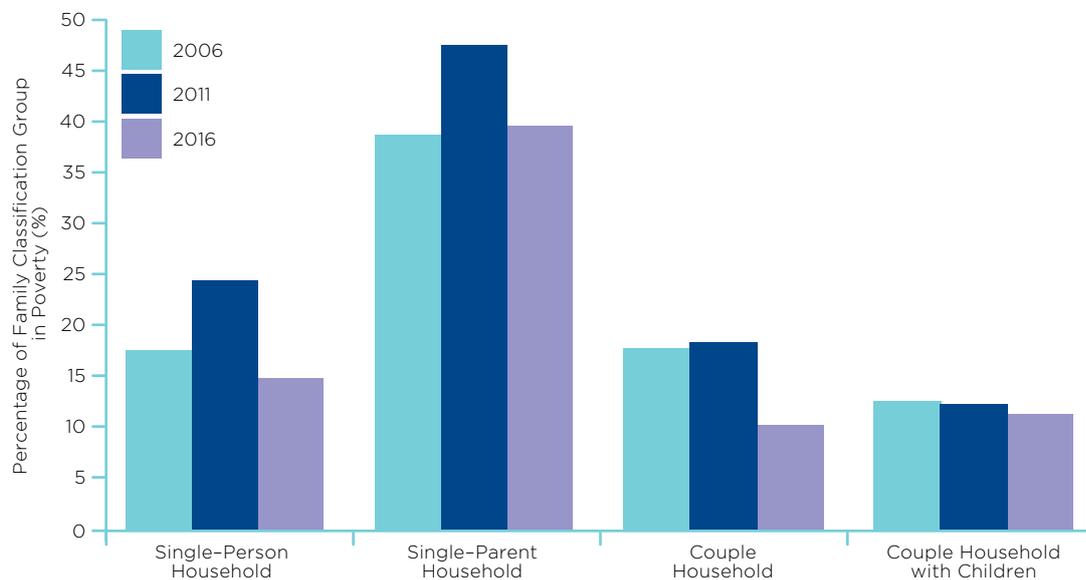
our sample, the most common group is couple households. They represent approximately 36 percent of the sample. The share of those in poverty represented by this group is as high as 37.8 percent in 2006 and as low as 27.7 percent in 2016. Within this group, the share in poverty fell from approximately 18 percent in 2006 and 2011 to approximately 10 percent in 2016. The lower shares in poverty, in part, are likely attributable to the observation above that poverty rates have fallen for those over 65.

The next group in our sample is single-person households. This classification captures young individuals as well as older individuals living on their own. This group represents approximately 30 percent of our sample. Of those in poverty, the share increased from approximately 32

to approximately 36 percent between 2006 and 2016. Looking within the group of single households, however, Figure 8 shows that there was an increase in poverty rates in 2011 but that this fell to below 2006 percentages in 2016.

For the remaining two groups, single-parent and two-parent families, within-poverty rates are relatively flat. Poverty rates for single-parent families increased by close to 1 percent, and there was a dramatic increase between 2006 and 2011. Single-parent families represent 4 percent of the sample but between 9.4 and 11.9 percent of the sample in poverty. For two-parent families the poverty rate declined slightly, by approximately 1.5 percent over time. Two-parent families represent approximately 29 percent of the sample and between 18.7 and 25 percent of the sample in poverty.

Figure 8. Poverty Rates by Family Composition



Notes for Figure 8: Poverty rates within group. Family composition is based on information on residential location of family members. Percentages for 2011 and 2016 are population-weighted.

3.6

Summary of Cross-Sectional Analysis



Above we have looked at static snapshots of family-level poverty in three Census years (2006, 2011, 2016) and have found variation among various socio-demographic groups of those identified in poverty. We have also observed differences in the within-group poverty rates and changes to these rates over time. On the positive side, individuals who are employed, have a university education and/or are relatively young enjoy consistently low poverty. The situation among many other groups is far worse: Indigenous individuals are twice as more likely to be in poverty as non-Indigenous groups; single persons have the highest poverty rate among all the family types; and individuals who are over 65 have the highest poverty rate among all age groups.

4. Dynamics of Poverty





In the last section we focused on poverty rates across different socio-demographic characteristics and changes in poverty rates over the three Census periods. In this section, we use Sample #2 for the analysis to focus on those for whom we observed in at least two Census years, in 2016 and at least 2006 or 2011. As Sample #2 captures a minimum of two Census years of data, we focus on dynamics for two periods. We go into further detail in the next section with respect to poverty patterns across all three Census periods for those we observed in all three years.

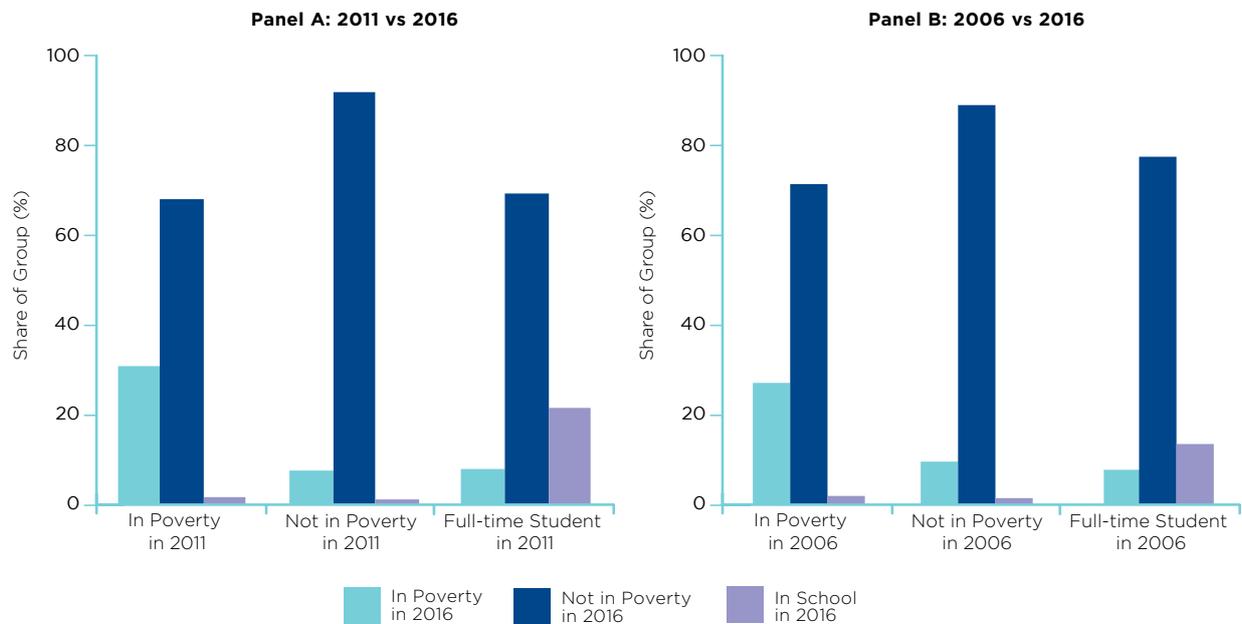
We start the analysis by observing an individual in poverty in 2006 or 2011 relative to their poverty status in 2016. In Table 8, Panel A, we report the statistics for individuals with records in 2011 and 2016. For individuals observed in 2016, we observe 2011 information over 90 percent.⁹ Approximately half of the individuals in poverty in 2016 were not in poverty in 2011 (column (1)). Of those not in poverty in 2016, close to 13 percent were in poverty in 2011.

Table 8. Comparison of Poverty Status in Prior Years Relative to Classification in 2016

	Classification in 2016		
	In Poverty (1)	Not in Poverty (2)	Full-time Student (3)
Number of observations	58,096	411,620	15,948
Panel A			
Share of individuals with information in 2011 and 2016	93.4%	95.8%	97.5%
In poverty in 2011	41.9%	12.9%	7.1%
Not in poverty in 2011	51.2%	79.4%	24.1%
Full-time student in 2011	7.0%	7.8%	68.8%
Panel B			
Share of individuals with information in 2006 and 2016	93.4%	94.9%	97.7%
In poverty in 2006	28.6%	10.6%	4.6%
Not in poverty in 2006	60.0%	73.3%	17.7%
Full-time student in 2006	11.4%	16.1%	77.8%

Notes for Table 8: A classification of in poverty means that the individuals' equivalised income (based on family structure) is less than 60 percent of the Australian median income. Statistics are population-weighted.

Figure 9. Comparison of Poverty Status in 2016 versus Prior Year



Notes for Figure 9: This figure represents individuals with information in 2011 and 2016 as shown in Table 8.

In Figure 9, we observe poverty in 2016 based on poverty status in 2011 (Panel A). Of those who were in poverty in 2011, approximately 31 percent remained in poverty in 2016. Thus, the majority of those in poverty in 2011 had exited poverty by five years later. Of those who were not in poverty or in school in 2011, less than 10 percent were in poverty in 2016. The comparison between 2011 and 2016 suggests that there is a sizable stickiness in being in poverty in both Census years. But there is also a suggestion that there are opportunities to move out of poverty.

In Table 8, Panel B, we report the statistics for those individuals with records in 2006 and 2016. Again, we were able to match most of the 2016 records to the 2006 records.¹⁰ This permits us to look at the changes over a 10-year period. As reported in Table 8, column (1), of those

in poverty in 2016, 28.6 percent were also in poverty in 2006. Of those not in poverty in 2016, 10.6 percent were in poverty 10 years earlier. Moving to Figure 9, Panel B, for the most part there is relatively good news. Of those who were in poverty in 2006, 27 percent were in poverty in 2016. Most were no longer in poverty but these statistics are only slightly lower than those for the five-year period. Of those who were not in poverty in 2006 or undertaking full-time study, however, close to 11 percent of those not in poverty and close to 8 percent who were in school were in poverty in 2016.

Reflecting on the statistics for a 10-year period, while there is still some evidence of stickiness in poverty it is substantially less than if we look at a more recent five-year period.

10. For individuals who have 2006 records matched to 2016 records, the 2006 poverty rate is 12.5 percent if we include full-time students in the denominator and 15 percent if we exclude full-time students. Thus the 2006 sample in this section has a higher poverty rate than that reported in the previous section.

5. Dynamics of Poverty II





To explore the dynamics of poverty within households, we rely on Sample #3, the sample of individuals for whom we observe income in all three Census years. It is worth noting that because individuals who experience disadvantage are more likely to drop out of the sample, the results of the analysis of this sample might have an 'optimistic bias' so that the levels of entrenchment for different groups would be lower than in the analysis of Sample #2.

5.1

Flowing into and out of Poverty



Our analysis begins with an exploration of the extent to which we observe a persistent state of poverty. In Table 9, we report the statistics of those in poverty based on our observation of these individuals being identified as in poverty. We will start with an examination of the patterns of poverty across all three Census years. In Table 9, of those who were in poverty in 2016, 55 percent were in poverty in 2006 and/or 2011. The majority of those with more than one year in poverty,

however, were in poverty for all three years (22 percent). The analysis reported in Table 9 suggests that if we define entrenched poverty as being in poverty for at least two consecutive Census years, more than 46 percent of those observed in poverty in 2016 were potentially suffering from entrenched poverty. There is also some evidence that individuals may cycle into and out of poverty. Of those in poverty in 2016, approximately 11 percent were in poverty in 2006 but not in 2011.

Table 9. Poverty Status in 2006 and 2011 based on 2016 Poverty Status

		2016	
		In Poverty (1)	Not in Poverty (2)
Number of observations		44,293	313,317
Individuals observed	In Poverty: 2006 and 2011	21.5%	5.4%
	In Poverty: only in 2011	23.5%	8.6%
	In Poverty: only in 2006	10.5%	6.9%
	Not in Poverty in 2006 or 2011	44.5%	79.0%

Notes for Table 9: The percentages reflect the share of the group (for example, in poverty in 2016) based on information from 2006 and 2011. Each column sums to 100 percent.

In contrast, of those not in poverty in 2016, a high proportion, 79 percent, were not in poverty in 2006 and 2011. About 5 percent of those not in poverty in 2016 were in poverty in both 2006 and 2011, suggesting that about 65 percent of those in poverty in both of the earlier years were able to exit poverty by 2016. Another 6.9 percent of those not in poverty in 2016 are classified as in poverty in 2006 but not in 2011.

To illustrate further the flow into or out of poverty, Figure 10 depicts for everyone in our sample the flow over the three Census periods that reflects the measure we use to define whether the individual should be classified as living in poverty, namely the ratio of family income to median income (adjusted for family type). This figure allows us to observe in greater detail the flows into and out of poverty between 2006 and 2016. The left-hand side of the figure captures the 2006 ordering of the ratio, the middle of the figure captures the 2011 ordering and the right-hand side captures the 2016 ordering. Those in poverty are depicted at the bottom of the figure. Those well above poverty are depicted at the top of the figure. Note that the demarcations of the ratios vary across the three periods, reflecting that the share of individuals in poverty differs across the three years. Figure 10 allows us to better understand issues such as (a) the degree of entrenched or persistent poverty and (b) the extent to which we observe cycling into or out of poverty. For this latter issue, we can better understand whether individuals are observed ‘jumping’ or ‘barely getting above/below our poverty line’.

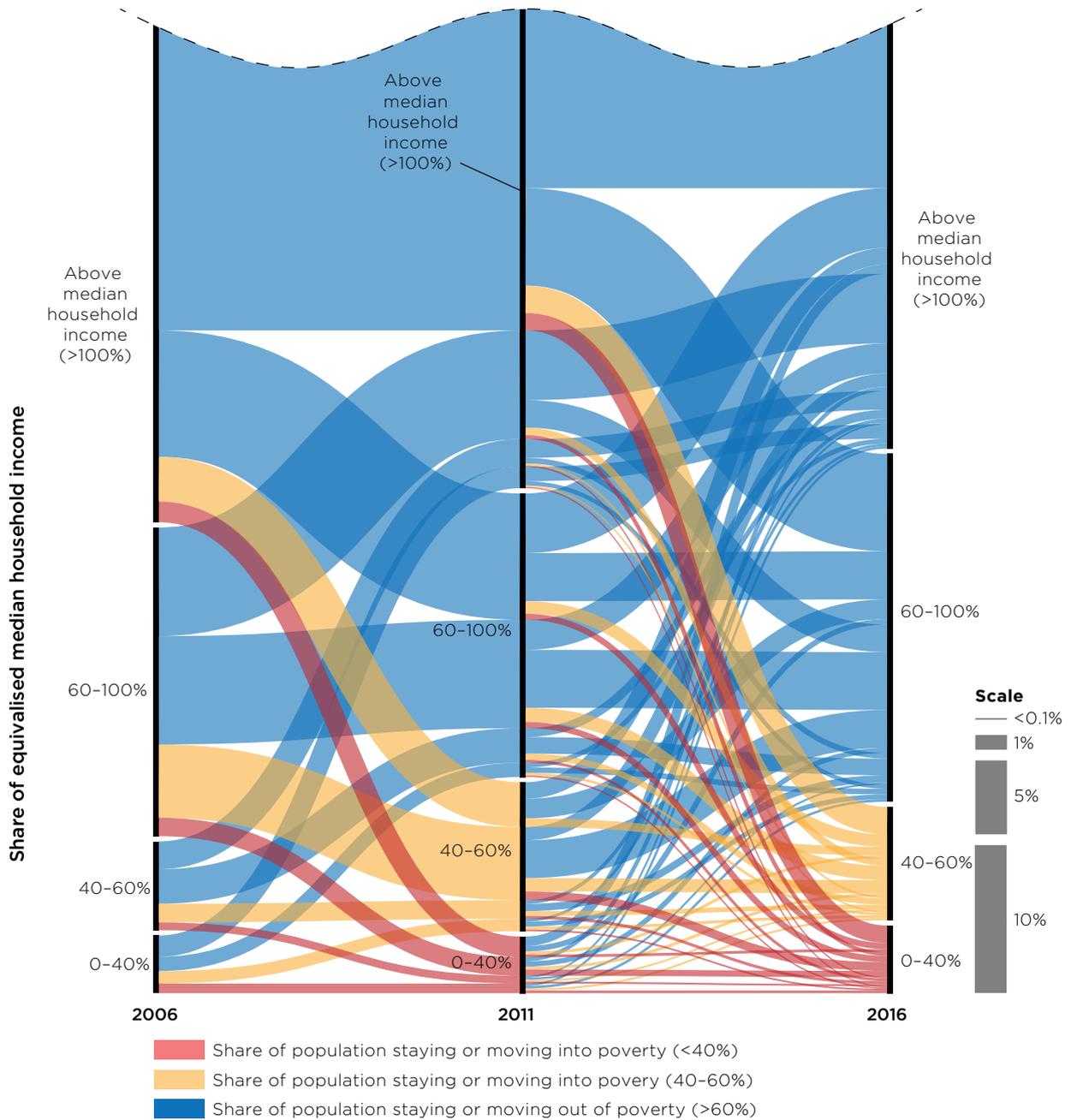
We have colour-coded the flow diagram to highlight some of the individual flows over the period. The colours are first defined based on the flow from 2006 to 2011. If an individual remains at or moves into our lowest level of poverty (a ratio that is less than 40 percent of median income) that individual is shaded red. If the individual remains at or flows into the second level of poverty (a ratio that is between 40 and 60 percent of median income), that individual is shaded yellow. All other individuals (those not in poverty in 2011) are shaded blue. We apply an analogous method for shading the flows between 2011 and 2016.

Beginning with those ever observed in deep poverty (less than 40 percent of median income), between 2006 and 2011, a high proportion of those in deep poverty in 2006 transitioned out of poverty and were replaced by mostly those not in poverty in 2006. Between 2011 and 2016, it appears that there is approximately an even split in the proportion of individuals who remained in deep poverty, those who remained in poverty but at the higher level (40 to 60 percent of median income), and those who exited poverty.

Let us move next to those in the next level of poverty, those with incomes that represent 40 to 60 percent of median income. Between 2006 and 2011, a high proportion exited poverty and a very small proportion dropped into deepest poverty (less than 40 percent of median income). Most transitioned out of poverty. Moreover, those entering this range of poverty came mostly from those who were not in poverty in 2006. Between 2011 and 2016, a high proportion exited poverty but a higher share either fell deeper into poverty or remained within the 40 to 60 percent of median income range.

Figure 10 demonstrates that much can change over a five-year period. Moreover, there are likely external factors that will drive the flows we observe in one direction or the other. Recall that between 2006 and 2011, the world economy was affected by the 2008 GFC and then a recession in the following years. While Australia was not as severely affected as other countries it did experience a slowdown. Figure 10 illustrates a high proportion of flow from above poverty into poverty between 2006 and 2011. While the share in poverty in 2016 is lower than the share in poverty in 2011, Figure 10 suggests that those in poverty in 2016 came primarily from those who moved into poverty between 2006 and 2011, suggesting a potentially long-lasting effect of the economic downturns of the late 2000s.

Figure 10. Flowing into and out of Poverty Over Time



Notes for Figure 10: This diagram⁹ depicts the transitions of individuals we observe in all three Census years in the ACLD dataset, ranked by their household incomes relative to the equivalised median household income. Red flows indicate individuals who remain at or transition to incomes below 40 percent of the median income. Yellow flows represent individuals who remain at or transition to incomes between 40 and 60 percent of median income. In other words, both yellow and red represent individuals who are in poverty or falling into poverty across a period of five years. Blue flows represent individuals who remain at and fall out of poverty (i.e. >60 percent of median income).

5.2

Cycles of Poverty and Socio-Demographic Characteristics



Figure 10 suggests that a high proportion of individuals move into and out of poverty. What might drive these movements?

In this section, we explore the correlations between socio-demographic characteristics and observations of moving into or out of poverty. We start first with statistics that reflect the rates of poverty based on observed characteristics.

For the purposes of this analysis, we use the characteristics as observed in 2006. In Table 10, column (1), we report for each demographic measure, the share of the sample observed with that measure. For example, approximately 32 percent of the sample have not completed high school. In the remaining columns, we report the shares of those identified with the given characteristic in poverty, separating those in poverty based on the number of Census years observed in poverty. For example, for those that have not completed high school, approximately 26 percent experienced poverty for one of the three Census years. A further 14.3 percent experienced poverty for two of the three Census years, and close to 4.5 percent experienced poverty for all three Census years.

Across all demographic groups, the highest proportion of those in poverty were only in poverty for one of the three years. The groups with the highest proportions of those in poverty are those with the lowest levels of educational attainment, those who are older, those not working or unemployed, those identified as Indigenous, and single households with children. Within each demographic group, there are strong correlations between those ever observed in poverty and those observed in poverty for two or three of the Census years. Stated differently, if there is a high probability of being in poverty in one year, there is an equally high probability of being in poverty across all three periods and experiencing more persistent (2+ years) poverty rates. Even for the groups with relatively low poverty rates, the absolute values are quite high. Couple households with children, for example, have the lowest overall poverty rates. But if they are observed in poverty for at least one year, there is a 30 percent likelihood that they will be in poverty for more than one year. This analysis illustrates that even for the groups who are least in poverty, entrenchment in poverty is a significant problem.

Table 10. Dispersion of Poverty-Based on Socio-Demographic Characteristics

Demographic Group (Based on 2006 Classification)	Share in Sample	Proportion Observed in Poverty for 1 of the 3 Years	Proportion Observed in Poverty for 2 of the 3 Years	Proportion Observed in Poverty for all 3 years
	(1)	(2)	(3)	(4)
Less than high school	32.1%	25.6%	14.3%	4.4%
High school	15.4%	18.9%	7.7%	2.3%
Certificate	25.8%	17.4%	6.5%	1.5%
Bachelor's degree or higher	20.0%	9.6%	2.6%	0.7%
15-34 years	25.6%	14.4%	4.7%	1.5%
35-49 years	34.7%	16.7%	6.3%	2.1%
50-64 years	27.2%	22.5%	10.4%	2.6%
65 years or older	12.5%	28.9%	22.2%	5.9%
Full-time employment	47.4%	11.8%	2.5%	0.3%
Part-time employment	18.8%	22.5%	7.2%	1.5%
Unemployed	2.5%	31.7%	18.1%	7.9%
Not in labour force	27.1%	28.6%	21.0%	6.9%
Single-person household	24.6%	20.5%	9.5%	2.9%
Single-parent household	4.1%	28.2%	18.3%	8.5%
Couple household	36.9%	19.2%	10.4%	2.4%
Couple household with children	34.4%	17.2%	6.0%	1.8%
Indigenous	1.3%	26.7%	15.3%	7.3%
Australian-born (non-Indigenous)	70.4%	18.4%	7.9%	2.0%
Foreign-born	28.2%	20.8%	11.3%	3.8%

Notes for Table 10: Demographic classification is based on the status in 2006. Definitions of the categories are the same as the categories in Chapter 3.

Table A.2.b in the Appendix shows the poverty and entrenchment rates for various cohorts.

A feature of Table 10 is that it holds constant the individual's characteristics based on what we observe for 2006. Over time, however, many of these characteristics may change. In addition to getting older, one may obtain more education, change employment status, and/or get married or have children leave the home (as they become adults). Our next exploration focuses on the potential differences in socio-demographic characteristics between those who move out of or into poverty.

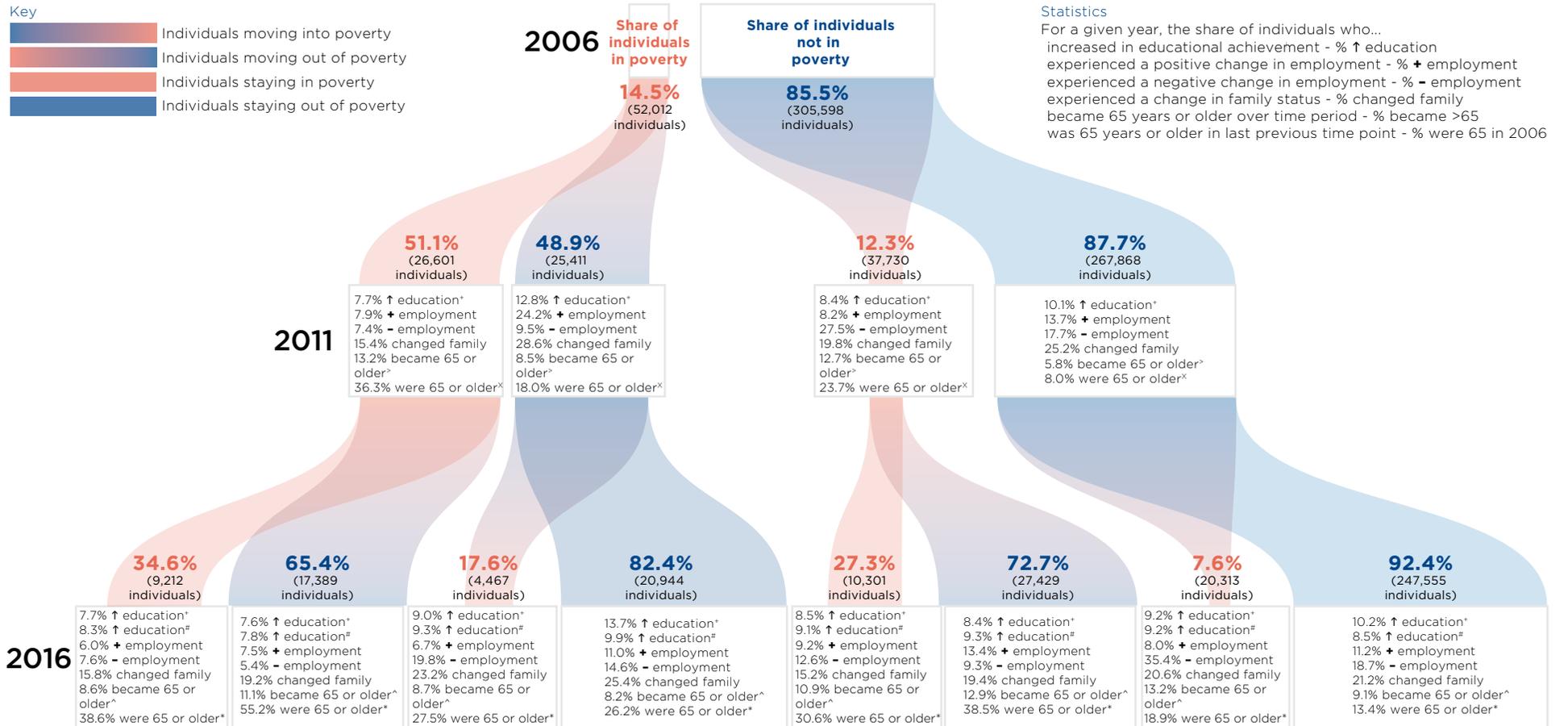
In Figure 11, we depict movement into or out of poverty in the form of a tree. We started by dividing the sample into two groups based on observed poverty status in 2006. In accordance with the statistics presented above, approximately 14.5 percent of those observed in all three Census years started out in poverty in

2006. For these individuals, by 2011, slightly less than half exited poverty by 2011.

For each branch, we identified changes from the previous five years in key socio-demographic characteristics for the individuals represented in the branch. This enables us to compare the differences in these changes across the branches for a given year. Those who exit poverty are more likely to report an increase in educational attainment. Approximately 13 percent of those not in poverty in 2011 increased their educational accreditations compared to less than 8 percent of those remaining in poverty.

More dramatic are the comparisons between the two groups with respect to employment. Those who exited poverty are much more likely to have improved their employment circumstances. Our definition of improved employment conditions includes reporting not being employed in 2006 but reporting being employed (part- or full-time)

Figure 11. Changes in Poverty and Changes in Situation



Notes for Figure 11: See Table 1 for exclusions criteria. * Denotes an increase in education between 2006 and 2011. # Denotes an increase in education between 2011 and 2016. > Denotes the share of individuals who became 65 years or older between 2006 and 2011. ^ Denotes the share of individuals who became 65 years or older between 2011 and 2016. x Denotes the share of individuals who were 65 years or older in 2006. * Denotes the share of individuals who were 65 years or older in age in 2011.

in 2011 as well as moving from part-time to full-time employment between 2006 and 2011.

Those exiting poverty were more likely to report a change in family circumstances and were less likely to be older (for example, reaching or being older than 65).

Next let us follow the branch of those who exited poverty in 2011. By 2016, approximately 82 percent remained out of poverty, with approximately 18 percent moving back into poverty. The changes in circumstances between these two 2016 groups are mostly the same. The only characteristic that is different is that those who remained out of poverty were more likely to have improved employment circumstances. Those who moved back into poverty were more likely to have experienced a negative shock to their employment status (19.8 percent versus 14.6 percent).

As noted above, approximately 51 percent of those in poverty in 2006 remained in poverty in 2011. By 2016, more than 65 percent of this group exited poverty. The most notable differences between those who remained in poverty versus those who exited poverty is that those who exited were more likely to be older. There were also changes in family circumstances (around 3 percentage point differences) and slightly improved employment circumstances. It is also worth pointing out that having improved education between 2006 and 2011 is highly correlated with staying out of poverty by 2016.

Let us now move to the branch of the tree that represents those who start out as not in poverty, that is, the majority of individuals in our sample. By 2011, more than 12 percent of these individuals were in poverty. If we compare the socio-demographic characteristics of those in poverty versus those who remained out of poverty for this group, a higher share of the individuals experienced a negative employment shock (27.5 percent of those in poverty reported a negative change versus 17.7 percent of those not in poverty). In addition, there is a higher proportion of individuals over 65 in the poverty group (12.5 versus 5.2 percent of those who turned 65 between 2006 and 2011). There are also differences with respect to educational attainment (lower rates for those in poverty) and changes in family circumstances (less change for those in poverty).

If we follow the branch of those who moved into poverty in 2011, approximately 27 percent of this group remained in poverty in 2016. The positive note is that a higher proportion of these individuals moved out of poverty between 2011 and 2016 in comparison to the branch of those who were in poverty in both 2006 and 2011. Those who moved out of poverty between 2011 and 2016 have higher rates of improved employment circumstances, changes in family structure and higher rates of being over 65 by 2016.

Finally, let us look at the branch of individuals who were not in poverty in 2006 or 2011. By 2016, close to 8 percent were in poverty. While this rate looks low because it is measured against those not in poverty in 2011 (approximately 268,000), it is important to note that 46 percent of those in poverty in 2016 come from this branch of the tree. If we compare the characteristics relative to those who were employed in 2006 and 2011 (and again in 2016), this group had a negative change in employment circumstances and is older. If, however, we compare this group to the other groups in poverty in 2016, the group is younger and had very high rates of negative change in employment circumstances.

Figure 11 illustrates several critical points. First is the importance of not simply thinking of poverty as a static situation. While there is a strong probability that moving out of poverty over time will have a lasting positive impact, it is not a certainty. Moreover, it also highlights the importance of exploring the roles played by educational attainment, changes in family characteristics and simple ageing in how we address poverty through policy and practice. Also, it is important to understand better the relationship between increased educational attainment and the alleviation of poverty.

In Appendix 4 we depict additional trees based on gender, age and immigration status (Figures A.4.a–A.4.e). In general, with a few notable exceptions, the patterns we observe are the same as those when we look at all individuals. First, when we restrict the sample to relatively young individuals (15–40) in 2006, the role of employment becomes larger (40 percent of those who moved out of poverty by 2011 and 20 percent of those who remained in poverty experienced a positive change in employment)



as does the role of education (21 percent of those who moved out of poverty by 2011 and 13 percent of those who remained in poverty achieved a higher level of education by 2011). In contrast, the role of employment is the same for men and women. Finally, the role of old age in poverty is bigger for foreign-born individuals (among all individuals, out of those who were in poverty in all three Census years, 37 percent were older than 65 in 2006, but for foreign-born individuals this number is 42 percent). Figure A.4.e shows the same flowchart for a subsample of individuals between 50 and 64 years old. We find that all previous correlates of poverty play a much smaller role in changing poverty status, except for a negative change in employment which was the main non-age-related correlate of moving into poverty between 2006 and 2011.

6. Role of the Community





This report focuses on poverty measured at an individual or household level. Payne and Samarage (2020) and others (McLachlan et al., 2013; Davidson et al., 2018) highlight the importance of measuring poverty at a community level. Moreover, these prior reports illustrate the fact that across Australia, community-level poverty rates are quite heterogeneous. What has been studied to a lesser extent, however, is how living in a community with high (or low) poverty rates affects individual or household poverty.

There are a number of reasons why we might think that community-level poverty rates can influence entry into or exit from poverty at an individual level. First, there are dynamics at a community level that can affect individual outcomes. These dynamics might include such things as employment opportunities, school quality, opportunities for skills development, and cost drivers such as housing and/or transportation costs. Second, the availability of services and support for those in poverty varies based on the density of families in poverty in a given community. A household living in a community where most households are not in poverty may limit the opportunities for the household to receive support from organisations such as food pantries, employment centres and the like. Third, there may be positive or negative

externalities associated with living in an area with high or low poverty rates. For example, if most households in a community are not living in poverty but have family members working full-time and/or children attending school and/or performing well, these positive externalities may provide encouragement to the household experiencing poverty.

In this final section, we explore the correlation between the flow into and out of poverty at an individual level and the observed differences in changes in community poverty as measured by entrenched poverty. This analysis is limited in scope, but we hope it will motivate future analyses that will help us to better understand how changes in one's community might affect changes in one's own circumstances.

Our starting point is the analysis undertaken by Payne and Samarage (2020). In that report, communities, measured at the SA2¹¹ level of geography, are divided into four categories based on computed poverty rates for 2006 and 2016: entrenched in poverty, transitioned into high poverty, transitioned out of high poverty, and never in high poverty. The community classifications are presented in Table 11.¹² Also reported in Table 11 is the distribution of individuals in the ACLD sample across these communities.

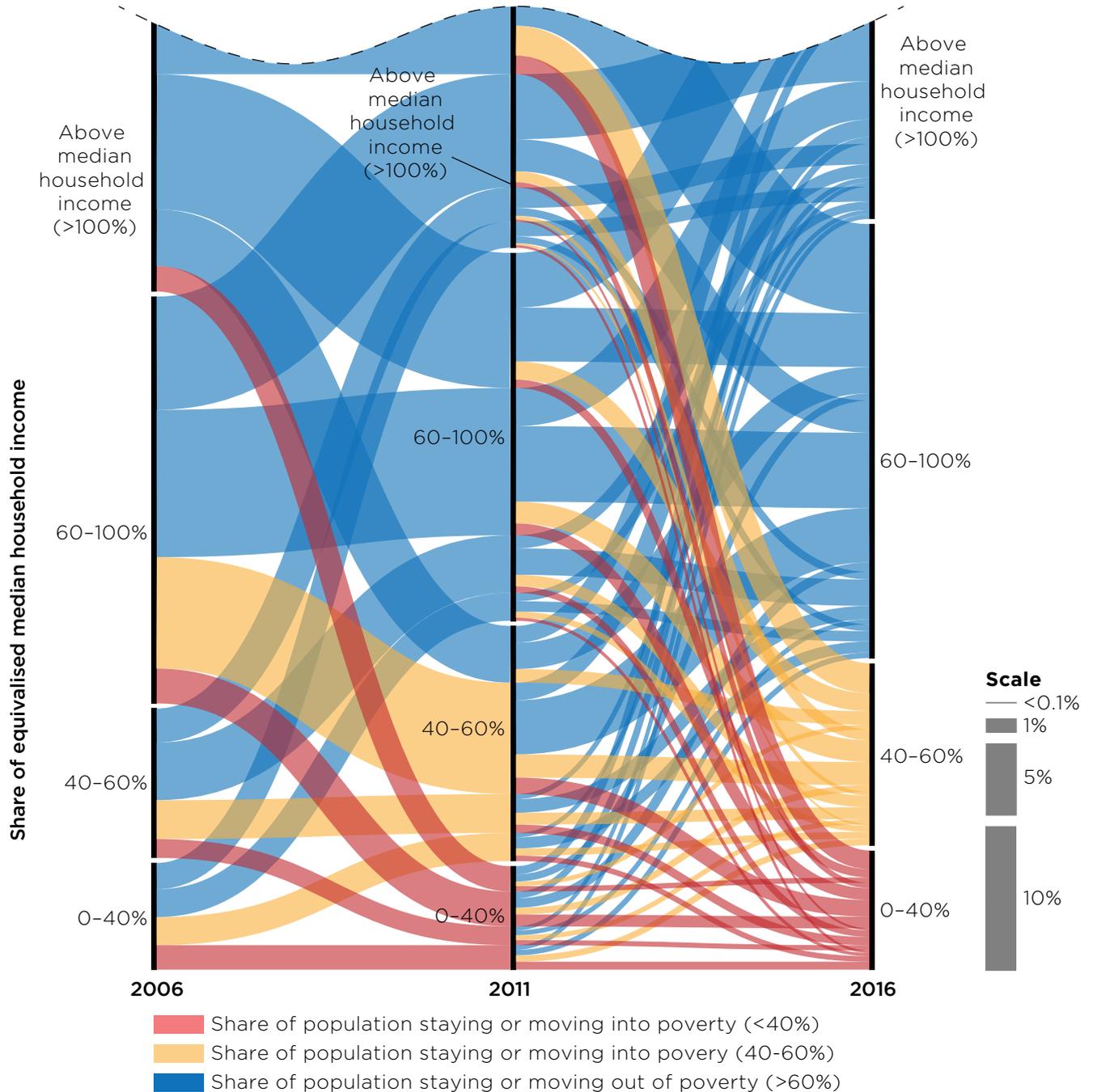
Table 11. Definitions of Communities

Community Type	Definition	Share of Sample by Community Type
Entrenched in poverty	The community is in the top 20 percent of all communities by poverty rate in 2006 and in 2016	10.3%
Transitioned into high poverty	The community is in the top 20 percent by poverty rate in 2016 but not in 2006	7.6%
Transitioned out of high poverty	The community is in the top 20 percent by poverty rate in 2006 but not in 2016	6.8%
Never in high poverty	The community is in the top 20 percent by poverty rate neither in 2006 nor in 2016	75.3%

Notes for Table 11: The classification of communities comes from Payne and Samarage (2020).

Figure 12. Poverty Flows based on Community Poverty

Figure 12A
Entrenched Poverty



Notes for Figure 12A-D: These diagrams depict the transitions of individuals who we observe in entrenched communities across all three Census years in the ACLD dataset. An entrenched community is defined as a community that is observed in the highest quintile of communities based on poverty rates in both 2006 and 2016. For the individuals in these communities, we have ranked their household income based on the ratio of their income to the equivalised median household income based on family type. The flows depicted in red capture those individuals whose incomes are less than 40 percent of the median income in the next period. The flows depicted in yellow capture those individuals whose incomes fall between 40 and 60 percent of median income in the next period. The flows in blue represent individuals whose incomes are higher than 60 percent of median income in the next period.

Figure 12. Poverty Flows based on Community Poverty

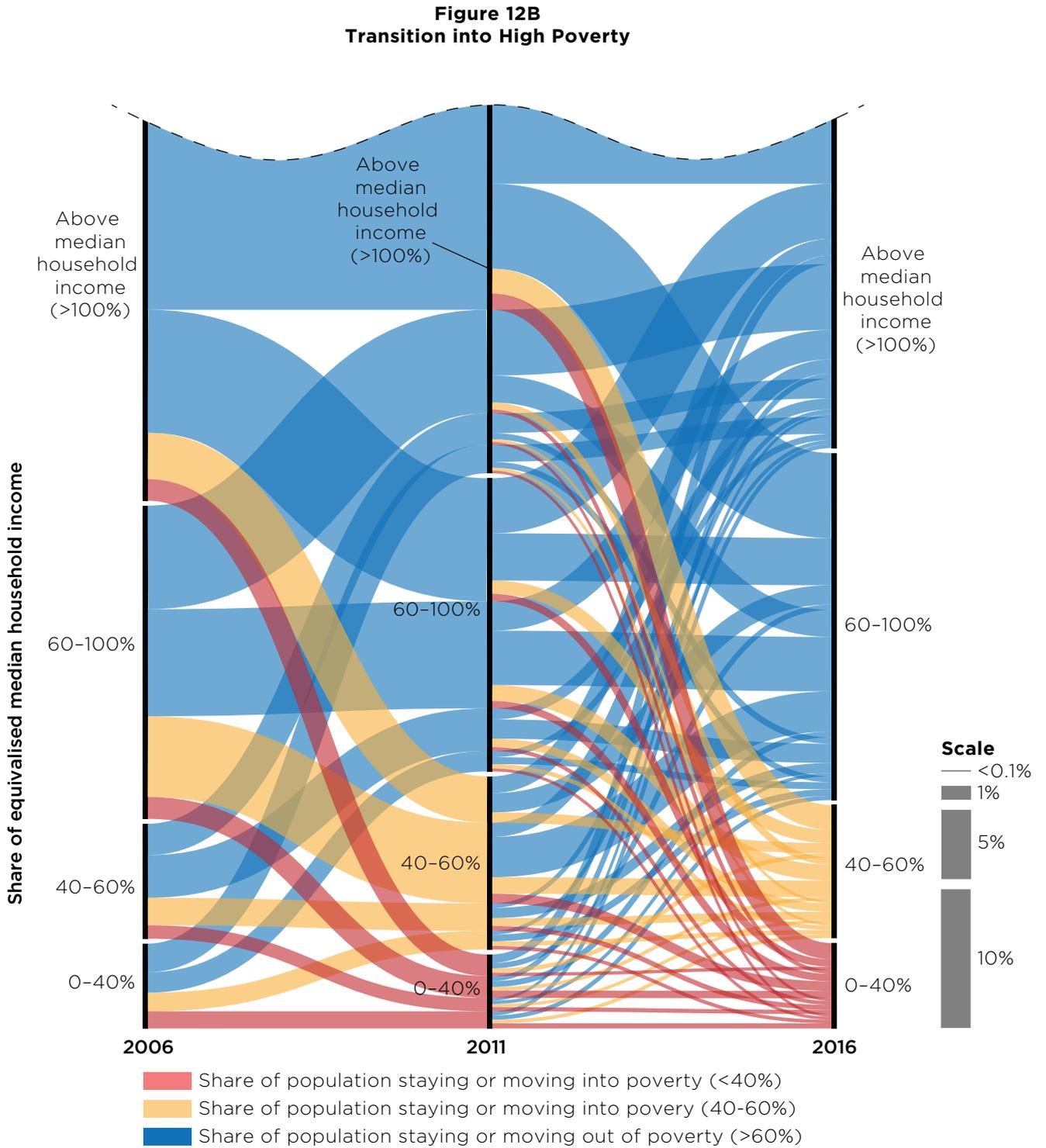


Figure 12. Poverty Flows based on Community Poverty

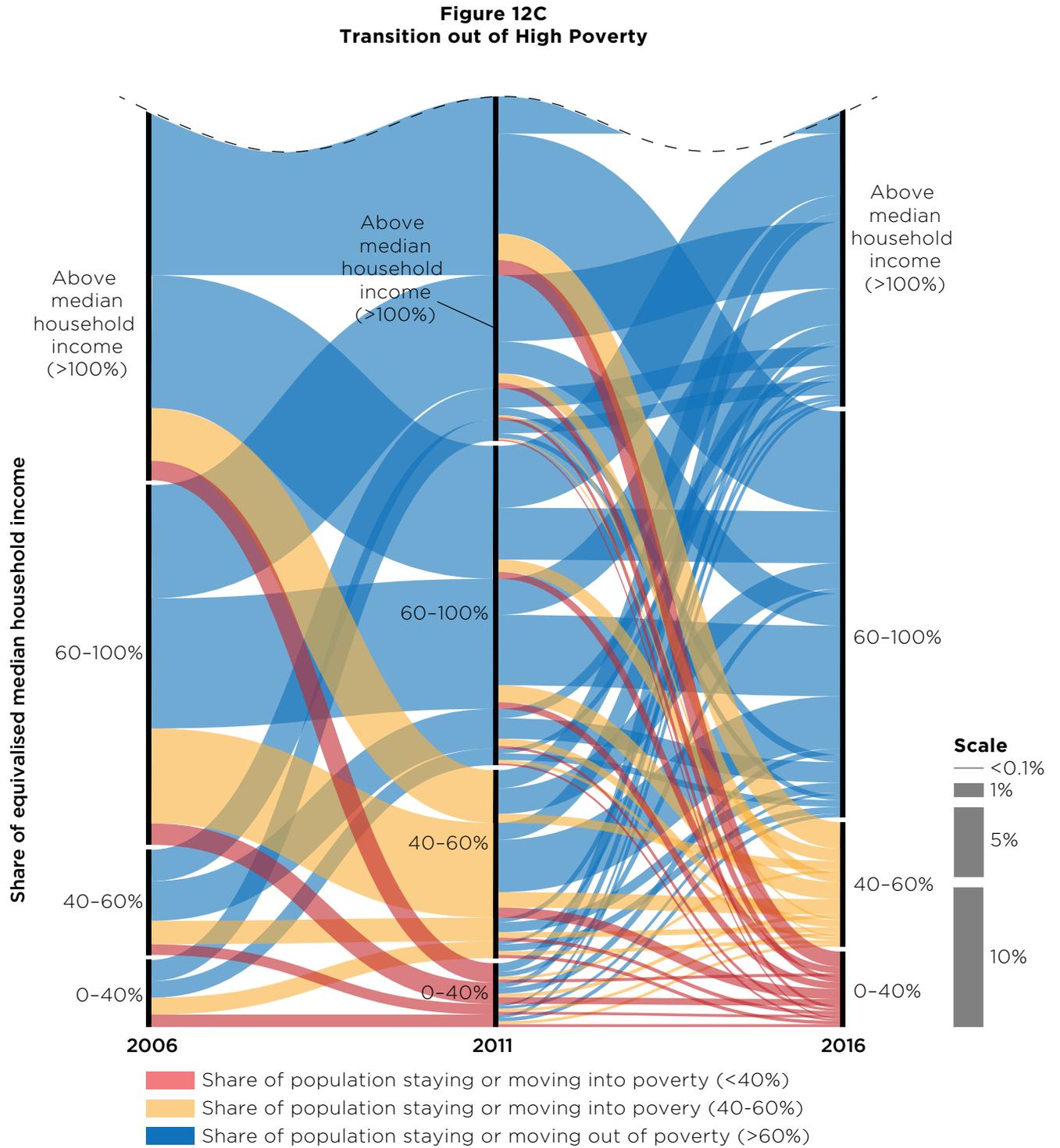
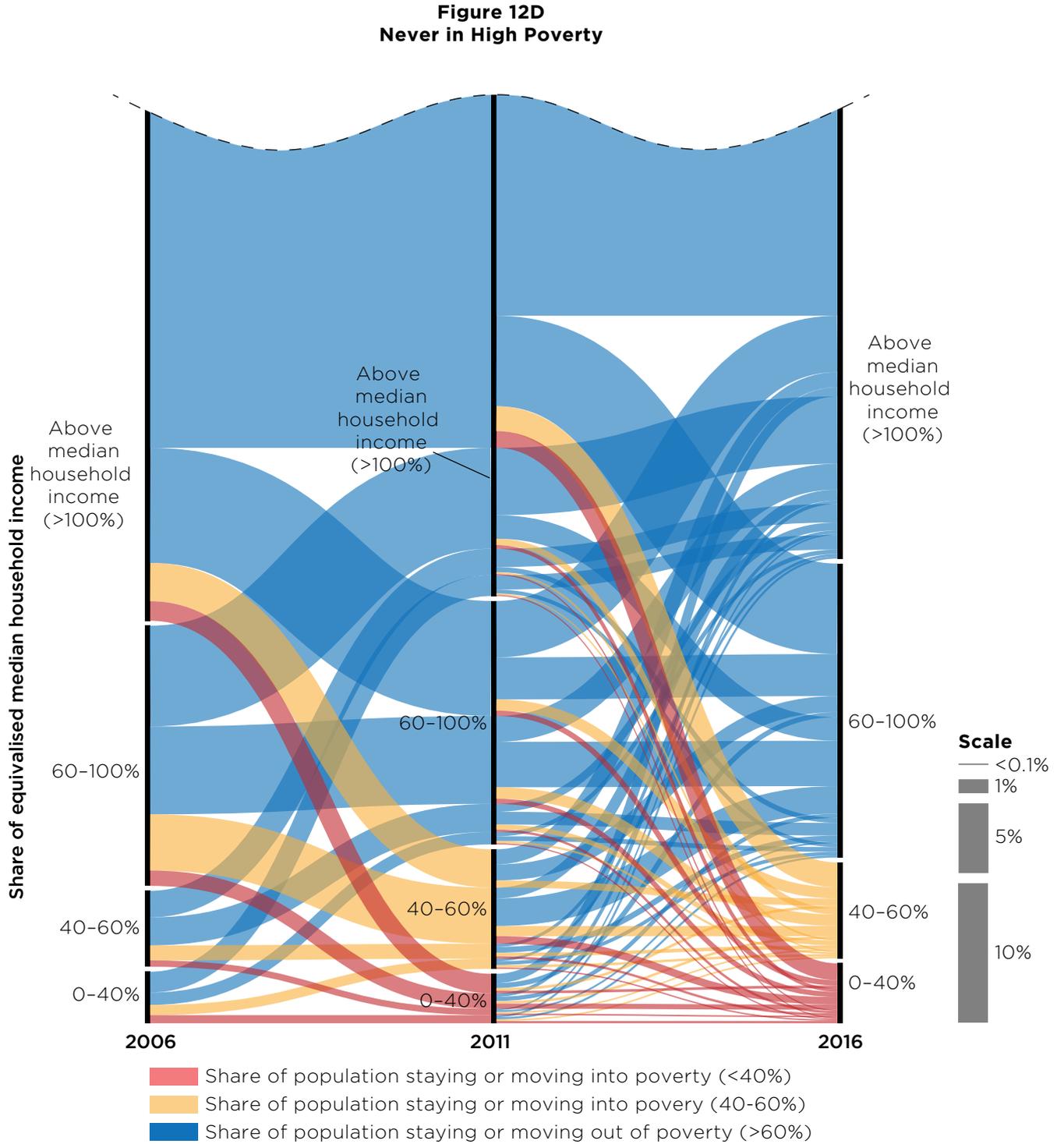


Figure 12. Poverty Flows based on Community Poverty



Recall that the ACLD data set is randomised across individuals. Thus, some communities will have a low number of individuals in the ACLD data set. Given that our analysis is focused on the correlation between individual poverty and the level of poverty in the community in which the individual is residing, our analysis includes all individuals in our balanced sample of individuals (those observed in all three years, Sample #3). For simplicity in constructing the figures, we classified each individual's community poverty type based on their location of residence in 2016.

Figures 12A–D depict the flow into and out of poverty for individuals in our four community types. In Figure 12A we depict the flows for those identified as living in a community that is entrenched in poverty. For these communities, it appears as though once in poverty, movement out of poverty is quite challenging. From 2006 to 2011, a high proportion of those near or below a poverty rate that is 40 percent of median income remained in poverty in 2011 and continued to be in poverty in 2016. Those who were closer to the poverty line cutoff (60 percent of median income) remained in poverty in 2011 but were more likely to move out of poverty by 2016.

In Figure 12B we depict the flows for individuals residing in communities that transitioned into high rates of poverty between 2006 and 2016. For those already in extreme poverty in 2006, the share of movement out of poverty is better than for those in entrenched communities (Figure 12A). It appears, however, that exiting poverty remains a challenge. There is a high proportion of individuals who flowed into poverty between 2006 and 2011. Those who remained close to the top of the poverty cutoff (60 percent of median income) exited poverty by 2016. Finally, a sizable proportion of individuals who were not in poverty in 2011 moved into poverty by 2016. For a subset of these individuals, a high proportion of those who appear to have exited poverty between 2006 and 2011 seems to have moved back into poverty by 2016.

Figure 12C depicts a rosier picture. For the most part, a high proportion of individuals who were in poverty in either 2006 or 2011 transitioned out of poverty by the next Census year. A potentially worrisome depiction, however, is that between 2011 and 2016 a reasonably high proportion of those in poverty in 2016 were well above the 60 percent of median household income ratio in 2011. This observation brings into question why individuals with relatively higher incomes reported incomes in 2016 that moved them into a state of poverty.

Finally, Figure 12D depicts a relatively positive picture, which suggests that few individuals in these neighbourhoods remained in poverty for more than one Census year. While the proportion of those with incomes less than 60 percent of median income in 2016 is only slightly lower than in 2011, the individuals in these groups for the two Census years are different.

Although it is only the tip of the iceberg, this last figure lends support to the assumption that the flow into and out of poverty is highly correlated with community poverty rates. And that it is important to consider not simply static measures of community poverty rates but the characterisation of the community over short and long periods.

7. Concluding Remarks





In this report, we have analysed individual-level correlates of poverty in Australia. We have demonstrated that there exists a large variation in poverty rates among various socio-demographic categories. Specifically, poverty rates among individuals who are aged over 65, single-family households and Indigenous people far exceed the average poverty rate. Moreover, the gap in poverty rates between different groups varies over time. We have provided a framing to categorise the depth and dynamics of income-based poverty. This report contributes to our understanding of poverty by providing a set of basic descriptive facts that can guide further research as well as policy responses.

We have also demonstrated that poverty has both a significant 'entrenchment' component as well as a 'dynamic' component. The likelihood of entrenchment in poverty varies substantially across socio-demographic groups. The highest rate of entrenchment (a probability to be observed in poverty in at least two Census years for a person who is in poverty in at least one Census year) is found among Indigenous people, single-parent households, those older than 65 years and those who have not yet finished high school. But the absolute level of entrenchment (always not less than 20 percent) remains high for all groups—even those for whom the overall poverty rate is low.

We also explored which changes in socio-demographic characteristics are more likely to be correlated with movements out of poverty. For example, a positive change in employment status or acquiring more education strongly predict the likelihood of escaping poverty.

We linked individual poverty to the poverty status of a community and explored the income trajectories of people in different types of community. We found that one's community, both geographic and social, is a predictor of transitions out of entrenched poverty. The analysis suggests that there are opportunities to take a place-based approach to break the cycles that make it less likely for individuals in certain communities to exit poverty than individuals who live in communities with low poverty rates.

This report illustrates the importance of understanding the cyclical dimension of poverty in the development and guiding of policy responses to support a reduction in poverty. The report also illustrates strong correlates between observable socio-demographic measures and poverty rates.

This report provides a critical foundation for testing and evaluating practice and policy designed to alleviate or mitigate poverty. It also illustrates the importance of creating relevant data environments that capture a range of information on individuals that can be measured over time.

Longitudinal data such as the Census support the ability to capture the dynamics of households and how these dynamics affect poverty. The report also however, demonstrates some of the weaknesses of current longitudinal Census data. These weaknesses include only capturing information once every five years but also the concern about sample attrition, especially for individuals at the lower ends of the income distribution.

The value of data that capture income and other dynamics at an individual or household level over time is that such data allow us to go beyond static snapshots to develop a deeper understanding of how the financial situation of individuals and families changes over time. Understanding financial dynamics provides a context for developing policies that will reduce the chance of negative income shocks for the individual or household.

Going forward, one of the most important advantages of longitudinal data for policy analysis is the possibility of testing causal hypotheses. One of the biggest limitations of cross-sectional (non-longitudinal) data is that all the comparisons we make can be driven by unobserved differences between individuals. For example, if one individual lives in community A and earns more than a person who lives in community B, we cannot statistically disentangle the impact of the community from the impact of individual-level characteristics (effort, talent, etc.). If, however, we observe one individual

moving between different communities, we get closer to understanding the impact of the community. We should still be concerned about other confounding factors, but such comparison is immensely more informative. In this report, we deliberately avoided claims about causality, but exploring causal hypotheses regarding community-level determinants of poverty in Australia is an important area of research with much to be explored.

Many questions remain open regarding poverty in Australia. For example, the role of governmental benefits to support the exit from poverty is not completely understood. While it has been demonstrated that in Australia transfers help keep many individuals out of poverty, we know little about whether these transfers have a long-term effect on remaining out of poverty. Pursuing strategies that permit the curation and combination of information that allows the tracking of income, social assistance and other factors that reduce the risk of moving into poverty or that increase the probability of exiting from poverty will allow us to dig deeper and better understand the dynamics of key socio-economic characteristics.

Our analysis suggests that entering poverty might have long-lasting effects on some individuals. While many are observed exiting poverty within a five-year period, this is not true for everyone. For instance, how might COVID-19 and the resulting recession affect poverty in Australia? Our analysis is consistent with the effect of economic recessions having two components. First, recessions reduce the opportunity to exit poverty if jobs or better employment opportunities are limited. Second, recessions might increase the number of people who enter poverty because of an increase in financial constraints often associated with higher unemployment rates. Experience of recessions in Australia and their impact on various demographic groups will be explored in future reports in the Breaking Down Barrier research series.

References

- Arulampalam, W. (2001). Is unemployment really scarring? Effects of unemployment experiences on wages. *The Economic Journal*, 111(475), F585–F606.
- Australian Bureau of Statistics (ABS) (2019). Information paper: Australian Census Longitudinal Dataset, methodology and quality assessment, 2006–2016. Catalogue Number: 2080.5.
- Australian Council of Social Service and University of New South Wales (ACOSS and UNSW) (2018). Poverty in Australia 2018. ACOSS, https://www.acoss.org.au/wp-content/uploads/2018/10/ACOSS_Poverty-in-Australia-Report_Web-Final.pdf, accessed 23 November 2020
- Australian Institute of Health and Welfare (AIHW) (2010). National best practice guidelines for collecting Indigenous status in health data sets. Catalogue Number: 29.
- Azpitarte, F. (2012). Social exclusion monitor bulletin December 2012. Brotherhood of St. Lawrence Research Bulletin, http://library.bsl.org.au/bslispui/bitstream/1/6189/1/Azpitarte_Social_exclusion_monitor_bulletin_Dec2012.pdf, accessed 23 November 2020
- Coates, B. and Chen T. (2019). Why Australia's old-age poverty rates are far lower than you might think. Grattan Blog, 10/04/2019, <https://blog.grattan.edu.au/2019/04/why-australias-old-age-poverty-rates-are-far-lower-than-you-might-think>, accessed 23 November 2020
- Chipperfield, J., Brown, J.J. and Watson, N. (2017). The Australian Census Longitudinal Dataset: Using record linkage to create a longitudinal sample from a series of cross-sections. *Australian & New Zealand Journal of Statistics*, 59(1), 1–16.
- Davidson, P., Saunders, P., Bradbury, B. and Wong, M. (2018). *Poverty in Australia, 2018*, ACOSS/UNSW Poverty and Inequality Partnership Report No. 2. Sydney: Australian Council of Social Services.
- Gregg, P. and Tominey, E. (2005). The wage scar from male youth unemployment. *Labour Economics*, 12(4), 487–509.
- McLachlan, R., Gilfillan, G. and Gordon, J. (2013). *Deep and Persistent Disadvantage in Australia*. Canberra: Productivity Commission.
- OECD (2015). *Pensions at a Glance 2015: OECD and G20 Indicators*. Paris: OECD Publishing.
- OECD (2020). *Employment Rate by Age Group (Indicator)*. Available at <https://data.oecd.org/emp/employment-rate-by-age-group.htm>, accessed 19 July 2020.
- Payne, A.A. and Samarage, R. (2020). *Spatial and Community Dimensions of Income Poverty*. Available at: <https://apo.org.au/sites/default/files/resource-files/2020-11/apo-nid309300.pdf>, accessed 23 November 2020.
- Wilkins, R., Laß, I., Butterworth, P., and Vera-Toscano E. (2019). *The household, income and labour dynamics in Australia survey: Selected findings from waves 1 to 17*, Melbourne: Melbourne Institute of Applied Economic and Social Research, University of Melbourne
- Vera-Toscano, E. and Wilkins, R. (2020). *Does Poverty in Childhood Beget Poverty in Adulthood in Australia? A report produced as part of the "Breaking Down Barriers" research series, led by the Melbourne Institute into understanding and overcoming disadvantage*. Available at: https://melbourneinstitute.unimelb.edu.au/_data/assets/pdf_file/0008/3522482/Breaking-Down-Barriers-Report-1-October-2020.pdf, accessed 23 November 2020.

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Professor A. Abigail Payne is the Director of the leading Australian research institute on applied economic and social research. The Melbourne Institute has a large team of academic researchers engaged in pathbreaking studies on a range of microeconomic and macroeconomic policy issues. She holds the Ronald Henderson Professor position in the Faculty of Business and Economics at the University of Melbourne. Professor Payne moved to Australia in 2016 from North America where she previously held positions in Canada and the US. She holds a PhD from Princeton University, a JD from Cornell Law School, and she graduated with honours from Denison University.

Professor Payne's research has emphasised understanding: the challenges faced by charities in their funding and delivery of public goods and services including understanding the donor motivation; the opportunities and constraints for individuals to pursue higher educational attainment; the role of school financing to promote equality in opportunity; and a general understanding of how government policy and expenditures affect individuals, communities, and underserved populations. While Professor Payne always has several projects on the go, she has turned her attention to understanding poverty and disadvantage. She has embarked on several projects that explore community poverty, the factors that support the exit from disadvantage, and the cyclical nature of poverty and disadvantage within households.

Professor Payne is actively involved in Australian economic and social policy as a member on multiple State and Commonwealth Government and University of Melbourne committees. Internationally she is a member of the Ifo Institute's Scientific Advisory Committee (SAC), serves on several boards, and is co-editor of the Economic Inquiry.

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Dr Samarage has extensive expertise in applying cutting edge data analytics and data visualisation techniques to effectively engage the reader. He is also skilled in public domain data extraction, machine learning and automation, and front-end development for creating interactive visualisations. Dr Samarage brings to the Institute his skills to enable best practices in data analytics and data protection to facilitate multi-disciplinary research, and translation of research evidence into policy and practice change.

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Dr Maxim Anayev is a Research Fellow at the Melbourne Institute: Applied Economics & Social Research. He holds Ph.D. in Political Science from University of California, Los Angeles. He applies methods of computational social science to the issues of economic deprivation, discrimination, social capital, and political economy. His research has been published in peer-reviewed outlets and presented at various professional conferences in the disciplines of Economics, Political Science, Demography, and Computer Science. At the Melbourne Institute, Dr Anayev works on several projects that use administrative data, such as Census records, tax records, health-related records to measure inequality, poverty, and impact of policy changes on life of Australians.

Appendix 1: Sample Restrictions

Our starting point for the individuals under study was full-time residents of Australia. From this sample, we excluded individuals that met one or more of the following characteristics. Note that the ordering of the exclusions is sequential. The number of individuals per exclusion rule is reported in Table A.1. First, we excluded individuals under 15 years of age for the given year under study. The reason for this is that 15 is the youngest age at which an individual can behave like an adult (no need for parental consent) in Australia. This translates into removing from the sample approximately 20 percent of individuals in the 2006 sample. Second, we excluded individuals whose family type was missing. The reason for this is that to measure whether the individual should be classified as living in poverty depends on the family composition of the individual. This resulted in exclusion of a further 6 percent of the sample in 2006 but less than 1 percent of the sample in 2011 and 2016. Third, we excluded individuals who were reported as visitors to the household on Census night because their status in their own household was unclear. Finally, if for the given Census year the individual was identified as being a full-time student, we excluded the individual from the sample. The reason for this final restriction is two-fold. First, full-time students are expected to have low incomes because they are not available to

work full-time. Whether this type of individual should be treated as living in poverty is not clear. Second, if a given student is not living at home but is being supported by their parents while they attend school, we would not capture the parents' income in the data. In addition, this exclusion restriction is a mechanism to remove younger individuals (15+) who are likely living at home because they are still in school and would not be expected to be working. We also excluded individuals for whom both household and individual incomes were unobserved.

After these exclusions, we were left with approximately 620,000 individuals in 2006, 560,000 in 2011 and approximately 480,000 in 2016. To identify whether an individual should be classified as being in poverty for their given family type, it is important to capture the income for the individual. We focused on two key measures: total personal income and total family income. Total personal income captures the income of the individual under study. Family income is the sum of the personal income reported for all family members residing in the household. Overall, the reporting of personal income was very high; more than 90 percent of those remaining in our sample. For individuals who were identified as part of a family living in the same household, however, there is quite a large share for which family income is reported

Table A.1.a. Observations Excluded from Study

	2006 (1)	2011 (2)	2016 (3)
Total number of individuals in ACLD	979,662	756,945	605,618
Total number of individuals aged less than 15 years in a given year	194,017	92,784	38,206
Total number of individuals with unobserved family structure	56,892	6,633	1,485
Total number of visitors	5,925	17,661	16,080
Total number of individuals who are full-time students	65,852	53,306	45,749
Total number of individuals with missing income information	36,852	26,101	22,708
Total number of individuals available for study	620,514	560,460	481,390

Notes for Table A.1.a: Each row represents a set of observations that are excluded from the study.

Table A.1.b. Missing Observations across Years

	Share of Observations with Missing Household Information or Not Observed	
	In 2011	In 2016
Panel A: Comparison of 2006 information with 2011 and 2016 information		
Observed in poverty in 2006	33.3%	51.9%
Observed not in poverty in 2006	27.3%	42.6%
Panel B: Comparison of 2011 information with 2016 information		
Observed in poverty in 2011		35.0%
Observed not in poverty in 2011		30.3%

Notes for Table A.1.b: Each cell represents the percentage of observations that fit the conditions in the vertical category out of the sample defined by the horizontal category.

as missing or as no income, despite personal income for the individual being reported as positive. This raised the challenge of whether to include individuals with incomplete information about family income in our analysis. Our concern was that the non-reporting of family income is not random. In Table A.2, we illustrate our concern. In Panel A, for those individuals for whom we observed income in 2006, we depict the share of observations for which we did not observe income in 2011 and 2016, respectively. We grouped the 2006 observations based on the poverty classification. For both years and both groups, a reasonably high proportion of the individuals are not captured in later years. There is a 6-percentage-point difference in missing information for those identified as being in poverty versus not being in poverty in 2011.

In 2016, this difference increased to close to 9 percentage points. In Panel B, we compare the share of individuals with missing information in 2016 relative to their poverty status in 2011. Similar to Panel A, there is a 5-percentage-point difference in the share of observations with missing income in 2016.

Based on this information, we took the following action. Whenever family income was missing for an individual under study, we used their personal income. Table A.3 reports the share of observations with missing income for different family types. We see that for all family types, reporting of personal income is much better. To reflect this change, we modified the adjustment factor for equalisation of the median: in particular, we set the number of additional

Table A.1.c. Reporting of Family and Personal Incomes

	2006			2011			2016		
	Share of sample	Share with Personal Income	Share with Family Income	Share of sample	Share with Personal Income	Share with Family Income	Share of sample	Share with Personal Income	Share with Family Income
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Single-parent households	4.1%	95.1%	89.1%	3.8%	96.1%	85.6%	3.9%	96.0%	88.9%
Couple households	36.0%	95.4%	90.8%	36.7%	95.4%	87.1%	35.5%	95.4%	89.1%
Couple households with children	28.1%	96.6%	88.7%	28.4%	97.1%	86.7%	28.6%	97.5%	89.5%

Notes for Table A.1.c: For the list of exclusions for each year of the sample, see Table 1. All observations in years 2011 and 2016 are population-weighted.

Table A.1.d. Classification of Non-Dependent Children

	2006 (1)	2011 (2)	2016 (3)
Share in sample	8.1%	8.7%	9.1%
Share in poverty by family income	12.9%	13.0%	12.0%
Share in poverty by personal income	20.8%	34.5%	26.7%

Notes for Table A.1.d: For the list of exclusions for the year of the sample, see Table 1. All observations in years 2011 and 2016 are population-weighted.

adults to 0, so that if the individual was a part of the couple, for the purpose of poverty classification they were treated as single. This rule is needed to avoid overestimation of poverty rates.

Another important nuance is treatment of non-dependent children, that is, individuals who are 15 years old or older and are not full-time students, but who live with their parents. These individuals often earn their own income but also rely on the resources provided by their household. Thus, for the purpose of poverty classification we used their household income (if available). An alternative would have been to always use their personal income. This decision is consequential since it dramatically changes the estimated poverty rates of these individuals. Table A.4 illustrates this point: if their personal income is used instead of the household income, their poverty rate is approximately two to three times higher than if the household income is used. It can be argued that their personal income is a better measure of their economic condition since they might be living with their parents precisely because they are in poverty and are not able to leave. However, another explanation is possible: they might be living with their parents because it is their preference and not an economic necessity. One should also keep in mind that they are still in a better position than those who are unable to rely on their household's income. For these reasons, we used their household income for poverty classification.

Appendix 2: Poverty Rates and Socio-Demographic Status

Table A.2.a. Poverty Rates by Contemporaneous Demographic Categories

		2006		2011		2016	
		Share of Sample (1)	Share of Sample in Poverty (2)	Share of Sample (3)	Share of Sample in Poverty (4)	Share of Sample (5)	Share of Sample in Poverty (6)
Age	15–19 years	2.9%	21.8%	2.4%	23.8%	1.9%	22.0%
	20–34 years	25.1%	9.8%	23.7%	11.4%	21.8%	9.4%
	35–49 years	30.2%	13.5%	29.1%	14.1%	27.7%	11.9%
	50–64 years	24.6%	16.7%	26.0%	17.2%	26.7%	13.9%
	Over 65 years	17.3%	34.3%	19.0%	40.8%	21.9%	17.1%
Age (Men)	15–19 years	1.6%	20.1%	1.4%	21.6%	1.1%	20.2%
	20–34 years	12.2%	7.8%	12.1%	8.7%	11.3%	7.7%
	35–49 years	14.6%	10.4%	14.3%	10.5%	13.7%	8.5%
	50–64 years	12.0%	14.2%	13.0%	14.6%	13.2%	11.8%
	Over 65 years	7.9%	35.0%	8.9%	38.1%	10.4%	16.6%
Age (Women)	15–19 years	1.3%	24.0%	1.0%	26.7%	0.8%	24.4%
	20–34 years	12.8%	11.8%	11.6%	14.2%	10.6%	11.2%
	35–49 years	15.6%	16.4%	14.7%	17.7%	14.0%	15.3%
	50–64 years	12.6%	19.1%	13.0%	19.8%	13.5%	15.3%
	Over 65 years	9.4%	33.7%	10.1%	43.2%	11.5%	17.4%
Employment	Full-time employment	43.9%	4.1%	44.3%	4.4%	42.6%	3.5%
	Part-time employment	17.1%	13.6%	17.7%	16.4%	18.3%	13.6%
	Away from work	3.6%	9.9%	3.5%	10.9%	2.8%	9.2%
	Unemployed	2.9%	41.4%	3.0%	41.2%	3.5%	36.2%
	Not in labour force	31.6%	35.4%	30.9%	41.5%	32.4%	23.3%
	Unobserved	0.9%	38.5%	0.6%	52.4%	0.5%	25.1%
Employment (Men)	Full-time employment	28.1%	4.0%	28.8%	4.2%	27.4%	3.4%
	Part-time employment	4.9%	14.6%	5.3%	17.1%	5.7%	14.2%
	Away from work	1.9%	9.1%	1.7%	9.9%	1.3%	8.4%
	Unemployed	1.6%	42.2%	1.6%	40.2%	1.9%	34.3%
	Not in labour force	11.6%	38.5%	11.9%	42.4%	13.1%	22.6%
	Unobserved	0.4%	39.6%	0.2%	50.3%	0.2%	25.3%
Employment (Women)	Full-time employment	15.8%	4.2%	15.5%	4.6%	15.2%	3.5%
	Part-time employment	12.2%	13.2%	12.4%	16.1%	12.6%	13.3%
	Away from work	1.7%	10.6%	1.8%	11.9%	1.5%	9.9%
	Unemployed	1.4%	40.5%	1.3%	42.3%	1.6%	38.5%
	Not in labour force	20.0%	33.6%	19.0%	40.9%	19.3%	23.7%
	Unobserved	0.5%	37.8%	0.4%	53.8%	0.3%	25.0%
Education	No high school	33.9%	25.4%	29.7%	31.0%	25.9%	20.2%
	High school	15.7%	15.1%	15.6%	18.5%	15.6%	14.9%
	Certificate	24.5%	12.2%	27.1%	14.5%	29.0%	11.2%
	Bachelor's degree or higher	17.8%	5.6%	21.4%	6.6%	25.0%	5.5%
	Unobserved	8.3%	27.6%	6.2%	34.3%	4.6%	20.4%
Education (Men)	No high school	14.1%	23.2%	12.6%	26.9%	11.0%	18.1%
	High school	7.3%	13.1%	7.4%	15.4%	7.6%	12.5%
	Certificate	15.5%	11.5%	16.9%	13.0%	17.4%	9.2%
	Bachelor's degree or higher	8.1%	4.7%	10.0%	5.7%	11.5%	5.0%
Education (Women)	No high school	19.8%	27.0%	17.1%	34.1%	14.9%	21.8%
	High school	8.4%	16.7%	8.1%	21.2%	8.0%	17.2%
	Certificate	9.0%	13.4%	10.3%	17.0%	11.6%	14.3%
	Bachelor's degree or higher	9.7%	6.2%	11.4%	7.4%	13.5%	6.0%
Family type	Single-person household	30.9%	17.6%	30.7%	24.2%	31.3%	14.9%
	Single-parent household	4.2%	38.8%	4.0%	47.5%	4.0%	39.6%
	Couple households	36.3%	17.9%	35.7%	18.3%	35.5%	10.2%
	Couple households with children	28.6%	12.7%	29.5%	12.4%	29.2%	11.2%
Indigenous/place of birth	Indigenous	1.7%	32.6%	2.6%	33.1%	2.9%	27.6%
	Australian-born (non-Indigenous)	70.2%	15.3%	68.9%	17.6%	66.9%	11.4%
	Foreign-born	28.1%	20.9%	28.5%	23.1%	30.2%	15.5%

Notes for Table A.2.a: See Table 1 for individuals excluded from the sample. Percentages for 2011 and 2016 are population-weighted.

Table A.2.b. Poverty and Entrenchment

Demographic Group (based on 2006 classification)	Share in Sample (1)	Poverty in at Least One Year (2)	Entrenchment (3)
Less than high school	32.1%	44.3%	42.2%
High school	15.4%	28.9%	34.6%
Certificate	25.8%	25.4%	31.5%
Bachelor's degree or higher	20.0%	12.9%	25.6%
15-34 years	25.6%	20.6%	30.1%
35-49 years	34.7%	25.1%	33.5%
50-64 years	27.2%	35.5%	36.6%
65 years or older	12.5%	57%	49.3%
Full-time employment	47.4%	14.6%	19.2%
Part-time employment	18.8%	31.2%	27.9%
Unemployed	2.5%	57.7%	45.1%
Not in labour force	27.1%	56.5%	49.4%
Single-person household	24.6%	32.9%	37.7%
Single-parent household	4.1%	55%	48.7%
Couple household	36.9%	32%	40%
Couple household with children	34.4%	25%	31.2%
Indigenous	1.3%	49.3%	45.8%
Australian-born (non-Indigenous)	70.4%	28.3%	35%
Foreign-born	28.2%	35.9%	42.1%

Notes for Table A.2.b: Entrenchment is defined as a proportion of those who are in poverty for more than one year out of those who are in poverty in at least one year.

Appendix 3:

Classification of Family Types

This section describes how ACLD data were used to classify family type for each individual. The following classifications were used: Single-Person Households, Single-Parent Households, Couple Households (without children), Couple Households (with children).

Single-Person Households:

Individuals who fit at least one of the following criteria:

- 'Household Composition' variable is set to 'lone 1-person household' or 'group household';
 - 'Relationship in the Household' variable is set to:
 - 'lone person'; or
 - 'group household member'; or
 - 'non-dependent child';
 - 'other related individual'; or
 - 'unrelated individual'; or
 - 'visitor (from within Australia)' (**note:** all visitors are excluded later); or
 - 'other non-classifiable relationship'.
 - 'Family Composition' variable is set to 'other family' or '1-parent family with no children under 15, no dependent students and with non-dependent children'.
-

Single-Parent Households:

Individuals who fit at least one of the following criteria:

'Family Composition' variable is set to:

- '1-parent family with children under 15 and dependent students'; or
 - '1-parent family with children under 15 and no dependent students'; or
 - '1-parent family with no children under 15 and with dependent students'.
-

Couple Household with Children:

Individuals who fit at least one of the following criteria:

'Family Composition' variable is set to:

- 'couple family with children under 15'; or
 - 'couple family with no children under 15 and with dependent students'.
-

Couple Household without Children:

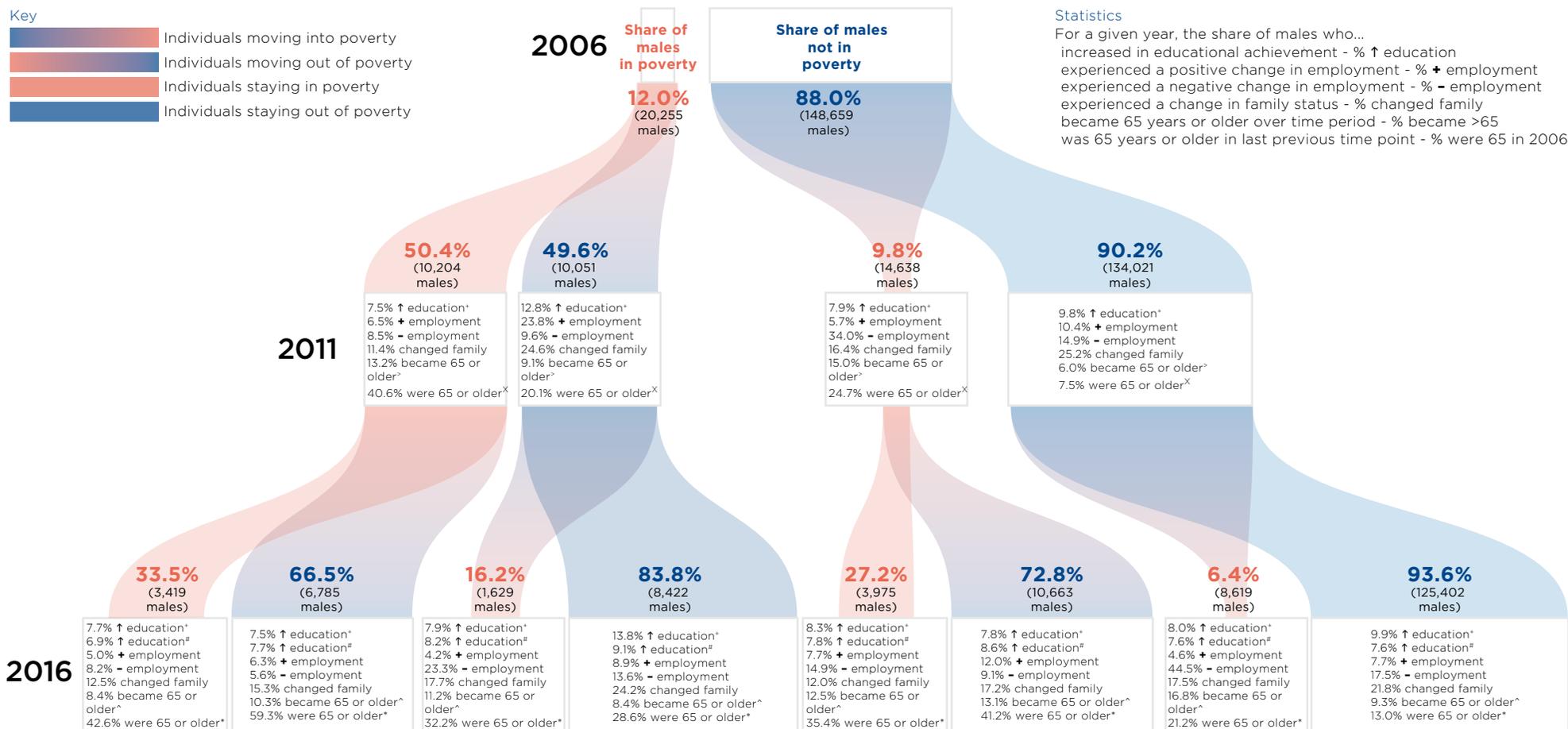
Individuals who fit at least one of the following criteria:

'Family Composition' variable is set to:

- 'couple family with no children'; or
 - 'couple family with no children under 15 and no dependent students'.
-

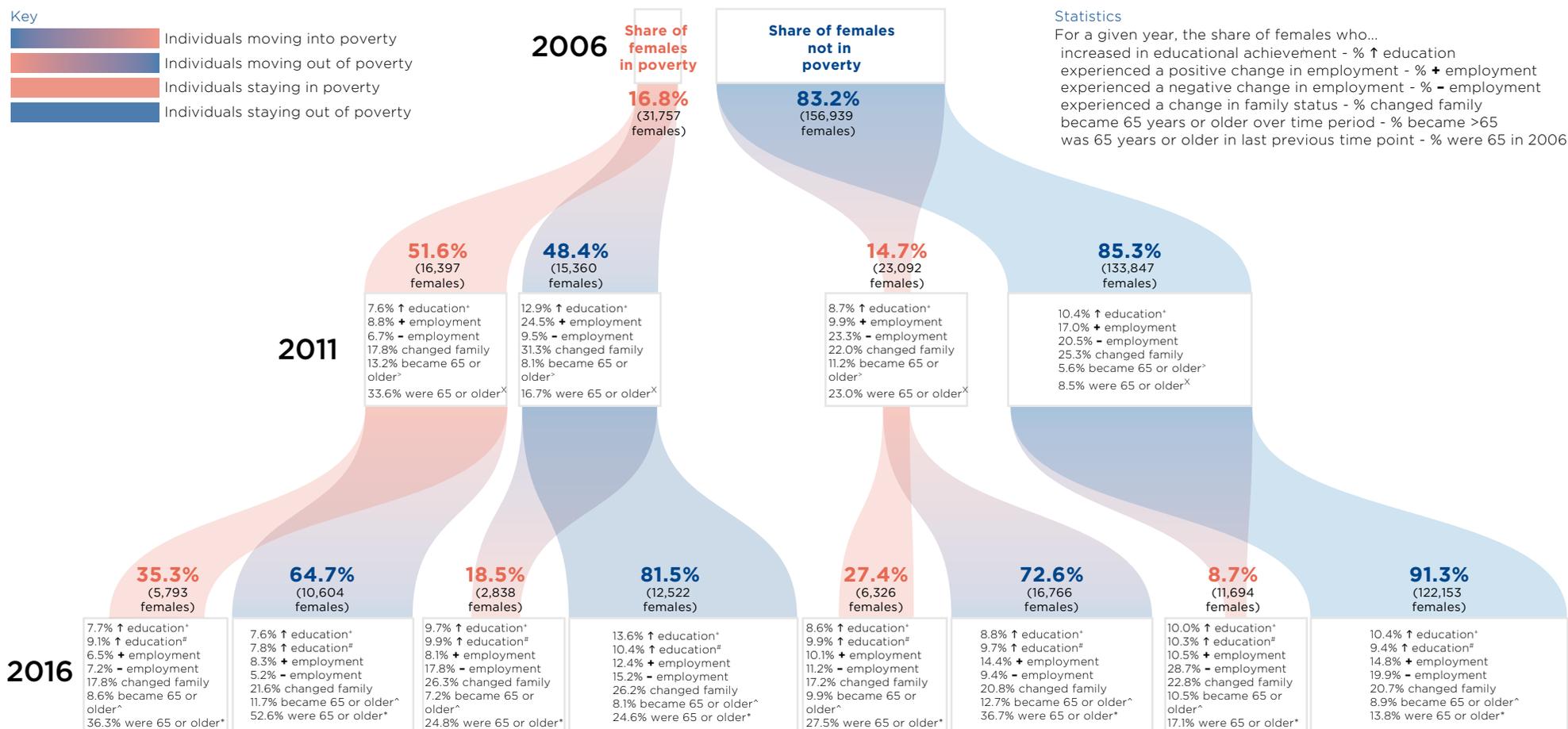
Appendix 4: Subgroup Analysis of Changes in Poverty and Changes in Socio-Economic Characteristics

Figure A.4.a. Changes in Poverty and Changes in Situation: Men



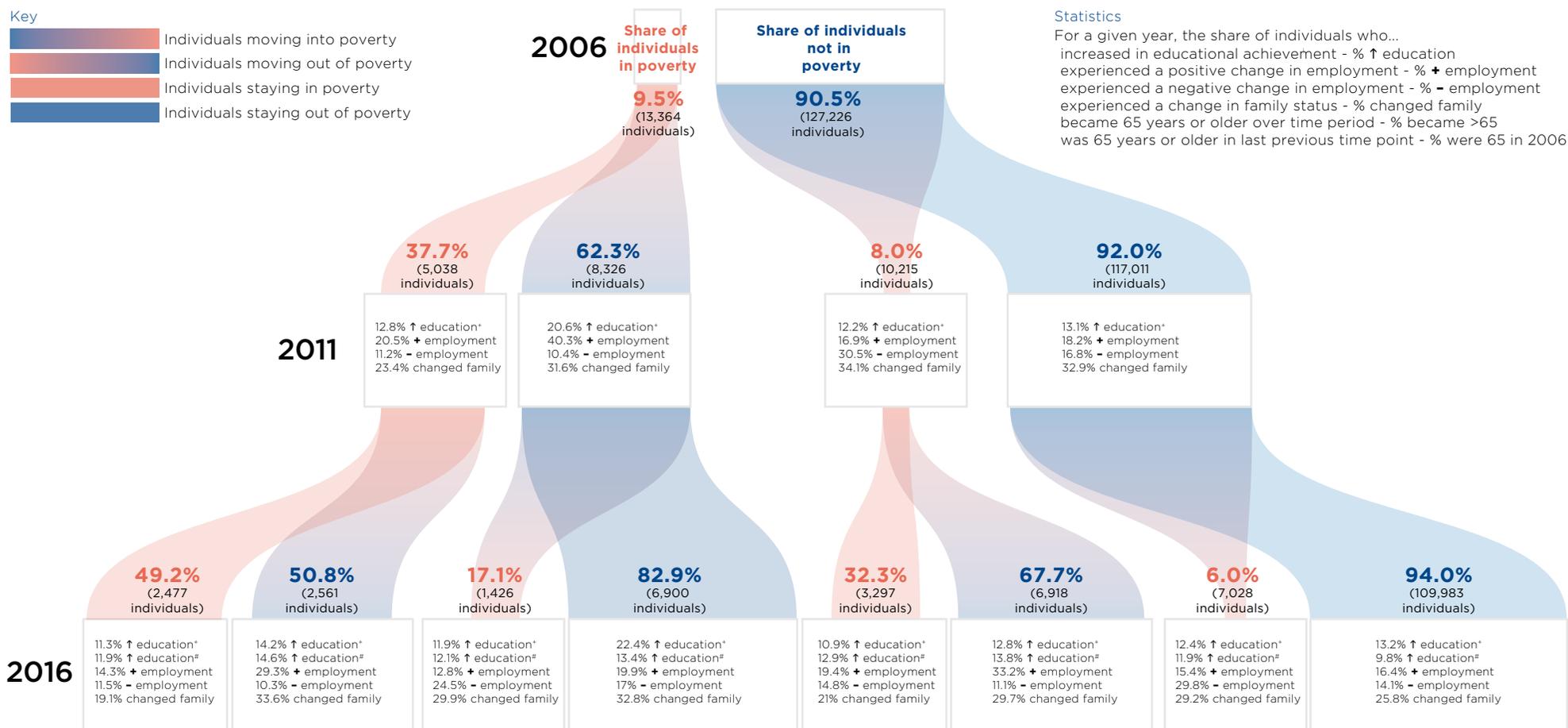
Notes for Figure 11: See Table 1 for exclusions criteria. + Denotes an increase in education between 2006 and 2011. # Denotes an increase in education between 2011 and 2016. > Denotes the share of males who became 65 years or older between 2006 and 2011. ^ Denotes the share of males who became 65 years or older between 2011 and 2016. X Denotes the share of males who were 65 years or older in 2006. * Denotes the share of males who were 65 years or older in 2011.

Figure A.4.b. Changes in Poverty and Changes in Situation: Women



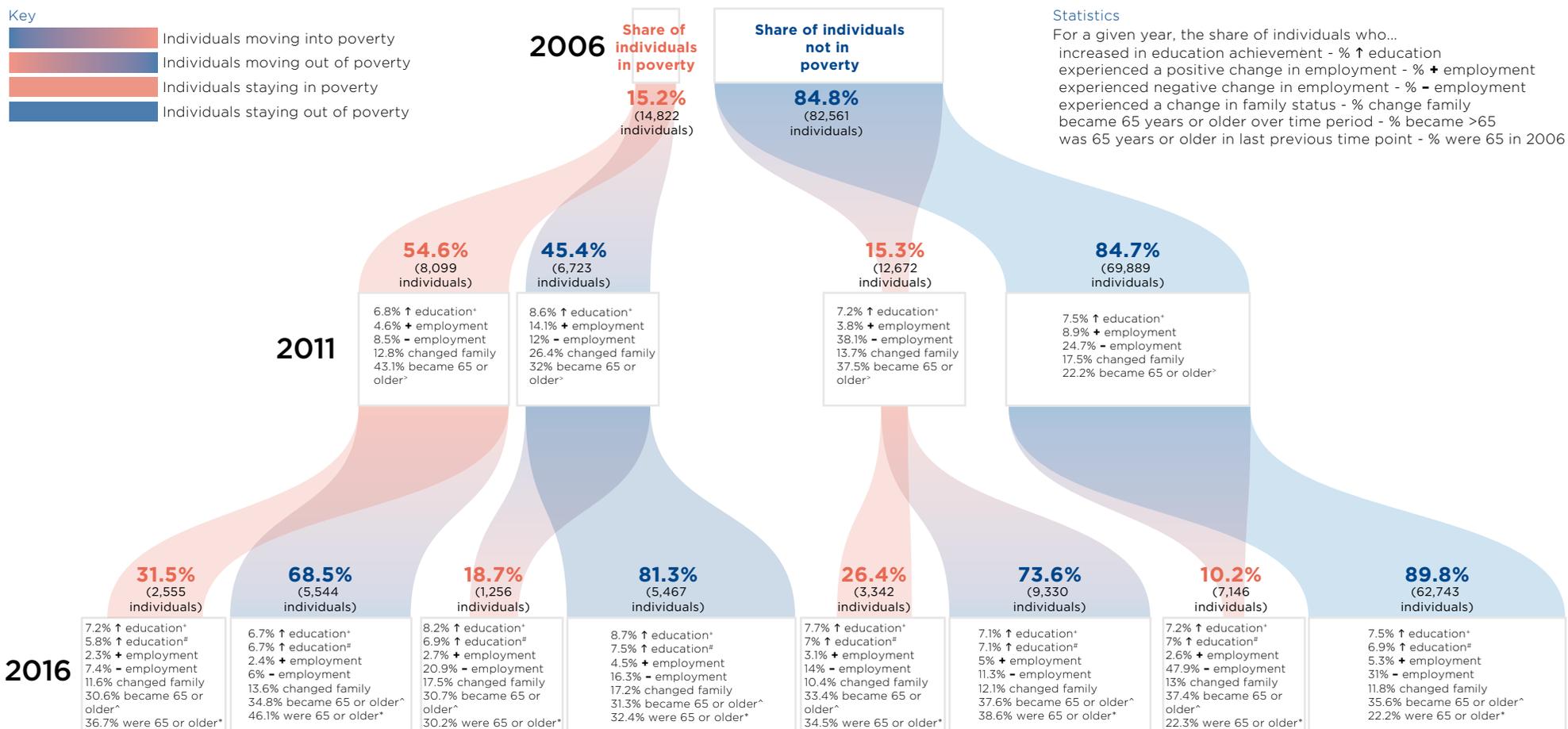
Notes for Figure 11: See Table 1 for exclusions criteria. + Denotes an increase in education between 2006 and 2011. # Denotes an increase in education between 2011 and 2016. > Denotes the share of males who became 65 years or older between 2006 and 2011. ^ Denotes the share of males who became 65 years or older between 2011 and 2016. X Denotes the share of males who were 65 years or older in 2006. * Denotes the share of males who were 65 years or older in 2011.

Figure A.4.c. Changes in Poverty and Changes in Situation: 15–40 year olds



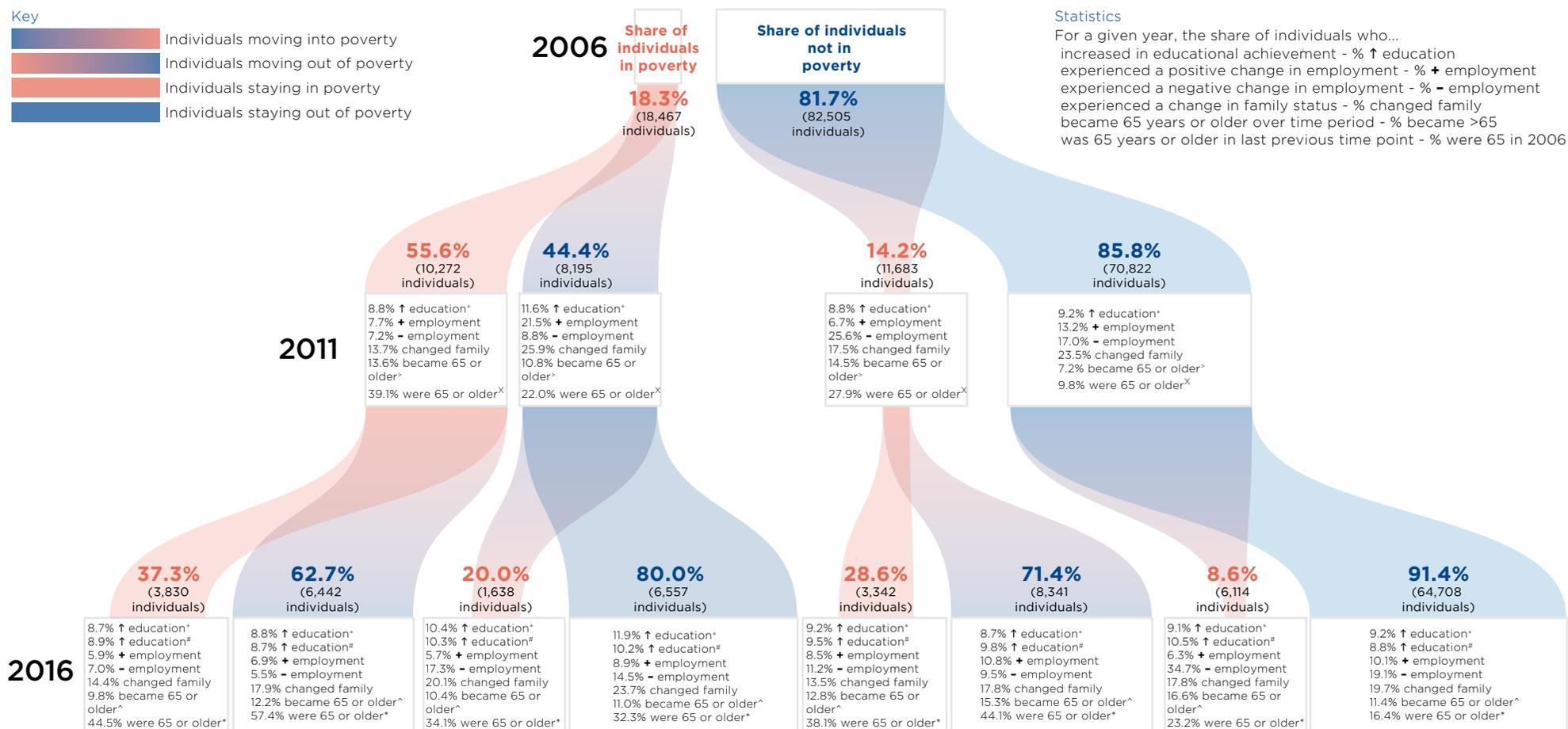
Notes for Figure 11: See Table 1 for exclusions criteria. + Denotes an increase in education between 2006 and 2011. # Denotes an increase in education between 2011 and 2016. > Denotes the share of males who became 65 years or older between 2006 and 2011. ^ Denotes the share of males who became 65 years or older between 2011 and 2016. X Denotes the share of males who were 65 years or older in 2006. * Denotes the share of males who were 65 years or older in 2011.

Figure A.4.d. Changes in Poverty and Changes in Situation: 50–64 year olds



Notes for Figure 11: See Table 1 for exclusions criteria. + Denotes an increase in education between 2006 and 2011. # Denotes an increase in education between 2011 and 2016. > Denotes the share of males who became 65 years or older between 2006 and 2011. ^ Denotes the share of males who became 65 years or older between 2011 and 2016. X Denotes the share of males who were 65 years or older in 2006. * Denotes the share of males who were 65 years or older in 2011.

Figure A.4.e. Changes in Poverty and Changes in Situation: Foreign-Born



Notes for Figure 11: See Table 1 for exclusions criteria. + Denotes an increase in education between 2006 and 2011. # Denotes an increase in education between 2011 and 2016. > Denotes the share of males who became 65 years or older between 2006 and 2011. ^ Denotes the share of males who became 65 years or older between 2011 and 2016. X Denotes the share of males who were 65 years or older in 2006. * Denotes the share of males who were 65 years or older in 2011.

Breaking Down Barriers

The Breaking Down Barriers report series provides in depth analyses of questions that will help us to better understand the challenges faced by individuals, families, communities, and governments that affect the existence and persistence of deep and entrenched poverty and disadvantage in Australia. The analyses have been undertaken by Melbourne Institute researchers and utilise economic and statistical techniques which involves developing shared data environments to study disadvantage and developing data visualisations.

This report has been produced as part of an ongoing partnership between the Paul Ramsay Foundation and the Melbourne Institute with the goal of informing and shaping policy and practice to break cycles of disadvantage. This includes improving our understanding of the extent, nature, and causes of socio-economic disadvantage in Australia and encouraging solutions that enable program development and policy innovation that foster opportunity and reduce poverty and disadvantage.

Melbourne Institute: Applied Economic & Social Research

The Melbourne Institute is a research-only, academic department in the Faculty of Business and Economics at the University of Melbourne with over 58 years of experience informing and shaping economic and social policy. The Melbourne Institute's list of longstanding accomplishments includes playing an active role in the establishment of the Henderson Poverty Line (by inaugural director Ronald Henderson), the development of the blueprint for Medibank/Medicare (John Deeble and Dick Scotton), the execution of the HILDA Survey and resulting analyses (Mark Wooden), the creation and running of the *Australian Economic Review*, the establishment of the consumer sentiment index (our longest running survey having been established in 1973 and now conducted in partnership with Westpac), and a host of many other achievements that have resulted from the engagement of researchers as part of the bedrock that informs macroeconomic, microeconomic, and social policy in Australia.

The Melbourne Institute is home to more than 50 economic researchers that are supported by survey methodologists and data scientists. Their work is recognised internationally by both academic and policy communities. All work undertaken by the Melbourne Institute is independent and impartial.

From its inception, researchers have been engaged in understanding poverty and disadvantage from a range of perspectives. This work has been in partnership with other organisations such as the Brotherhood of St. Laurence, as a node of the ARC funded Centre of Excellence for Children and Families over the Life Course, and a range of commonwealth and state government departments. Current projects that affect our understanding of poverty or disadvantage include studies to understand employment, family dynamics, social housing, tax and transfer policies, consumer expectations, the delivery of health care, intergenerational disadvantage, and studies of particular populations in Australia.

Paul Ramsay Foundation

The Paul Ramsay Foundation seeks to identify and partner with individuals, communities and organisations working to create an Australia where people can overcome disadvantage and realise their potential.

The late Paul Ramsay AO established the Foundation in 2006 and, after his death in 2014, left the majority of his estate to continue his philanthropy for generations to come.

His commitment to good works has allowed the Paul Ramsay Foundation to support the for-purpose sector with grants of more than \$350 million made since 2016 to more than 90 different partners, committed as the Paul Ramsay Foundation is to achieving lasting change.